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REPORT OF PROCEEDINGS

AT

PUBLIC HEARINGS REGARDING PROPOSED CLASSIFICATIONS

FOR THE

WATERS OF THE NEUSE RIVER BASIN

June 25 and 26, 1959

North Carolina

State Stream Sanitation Committee

State Department of Water Resources

Division of Stream Sanitation and Hydrology

Raleigh

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REPORT OF

PUBLIC HEARINGS ON THE NEUSE RIVER BASIN

POLLUTION SURVEY REPORT NO. 7 AND PROPOSED

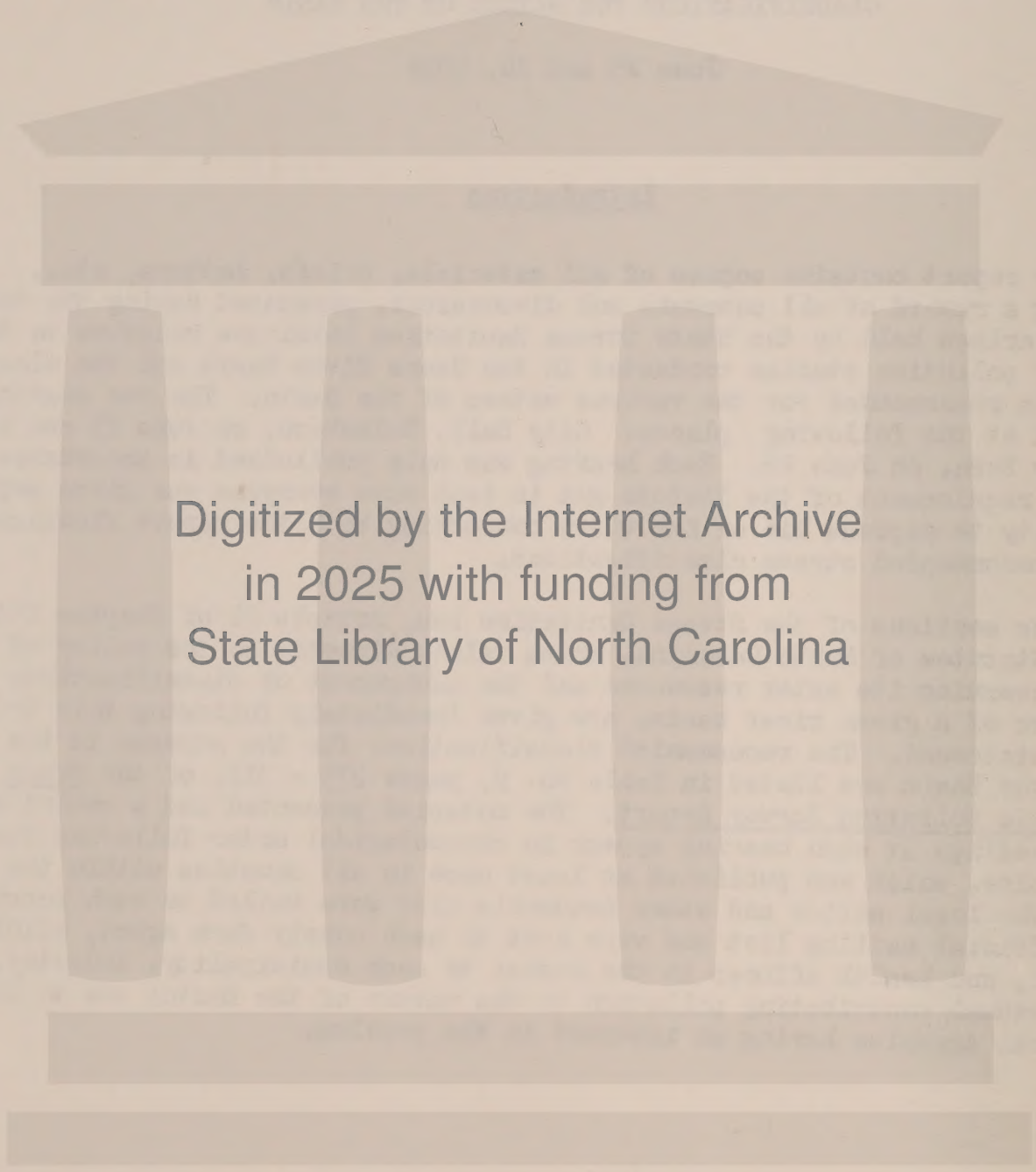
CLASSIFICATIONS FOR WATERS OF THE BASIN

June 25 and 26, 1959

Introduction

This report contains copies of all materials, briefs, letters, etc., including a record of all comments and discussions, presented during the two public hearings held by the State Stream Sanitation Committee relative to the report of pollution studies conducted in the Neuse River Basin and the classifications recommended for the various waters of the Basin. The two hearings were held at the following places: City Hall, Goldsboro, on June 25 and City Hall, New Bern, on June 26. Each hearing was duly publicized in accordance with the requirement of the Statute and in each case everyone was given ample opportunity to express his or her views concerning both the report findings and the recommended stream classifications.

Those sections of the Stream Sanitation Law, Article 21 of Chapter 143, General Statutes of North Carolina, which relate directly to the policy of the State concerning its water resources and the assignment of classifications to the waters of a given river basin, are given immediately following this introductory statement. The recommended classifications for the streams in the Neuse River Basin are listed in Table No. 9, pages 279 - 311, of the Neuse River Basin Pollution Survey Report. The material presented and a record of the proceedings at each hearing appear in chronological order following the legal notice, which was published at least once in all counties within the Basin. The legal notice and other documents also were mailed to each person on the official mailing list and were sent to each county farm agent, wildlife protector, and health officer in the Basin; to each municipality, industry, and individual contributing pollution to the waters of the Basin; and to State and Federal Agencies having an interest in the problem.



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Excerpt From Law Relating to Stream Sanitation

(Article 21, General Statutes of North Carolina)

SECTION 143-211. Declaration of Policy. It is hereby declared to be the policy of the State that the water resources of the State shall be prudently utilized in the best interest of the people. To achieve this purpose, the government of the State shall assume responsibility for the quality of said water resources. The maintenance of the quality of the water resources requires the creation of an agency charged with this duty, and authorized to establish methods designed to protect the water requirements for health, recreation, fishing, agriculture, industry, and animal life. This agency shall establish and maintain a program adequate for present needs, and designed to care for the future needs of the State.

SECTION 143-215. Water classification; standards and assignment of classifications.

(a) Duties of Committee Under This Section: The committee is hereby directed and empowered, as rapidly as possible within the limits of funds and facilities available to it, and subject to the procedural requirements of this Article:

(1) To develop and adopt, after proper study, a series of classifications and the standards applicable to each such classification, which will be appropriate for the purpose of classifying each of the waters of the State in such a way as to promote the policy and purposes of this Article most effectively;

(2) To survey all the waters of the State and to separately identify all such waters as the committee believes ought to be classified separately in order to promote the policy and purposes of this Article, omitting only such waters as, in the opinion of the committee, are insufficiently important to justify classification or control under this Article; and

(3) To assign to each identified water of the State such classification, from the series adopted as specified above, as the committee deems proper in order to promote the policy and purposes of this Article most effectively.

(b) Criteria for Classification: In developing and adopting classifications, and the standards applicable to each, the committee shall recognize that a number of different classifications should be provided for (with different standards applicable to each) so as to give effect to the need for balancing conflicting consideration as to usage and other variable factors; that different classifications with different standards applicable thereto may frequently be appropriate for different segments of the same water; and that each classification and the standards applicable thereto should be adopted with primary reference to an existing or a contemplated best usage to be made of the waters to which such classification will be assigned.

(c) Criteria for Standards: In establishing the standards applicable to each classification, the committee shall consider, and the standards when

finally adopted and published shall state: The extent to which any physical, chemical, or biological properties should be prescribed as essential to the contemplated best usage.

(d) Criteria for Assignment of Classifications: In assigning to each identified water the appropriate classification (with its accompanying standards), the committee shall consider, and the decision of the committee when finally adopted and published shall contain its conclusions with respect to the following factors as related to such identified waters:

(1) The size, depth, surface area covered, volume, direction and rate of flow, stream gradient and temperature of the water;

(2) The character of the district bordering said water, including any peculiar suitability such district may have or any dominant economic interest or development which has become established in relation to or by reason of any particular use of such water;

(3) The uses which have been made, are being made, or may in the future be made, of such water for transportation, domestic consumption, industrial consumption, bathing, fishing and fish culture, fire prevention, the disposal of sewage, industrial wastes and other wastes, or any other uses;

(4) The extent to which such water is already receiving sewage, industrial waste, or other waste as a result of present or past usage of the water and the relative economic values involved in improving or attempting to improve the condition of such water.

(e) Proposed Adoption and Assignment of Classification: Prior to the adoption by the committee of the series of classifications and standards applicable thereto as specified in subparagraph (a) (1) of this Section, prior to the assignment by the committee of any such classifications to any waters as specified in subparagraph (a) (3) of this Section, and prior to any modification of any of such actions previously taken by the committee, the committee shall give notice of its proposed action and shall conduct one or more public hearings with respect to any such proposed action in accordance with the following requirements:

(1) Notice of any such hearing shall be given not less than 20 days before the date of such hearing and shall state the date, time, and place of hearing, the subject of the hearing, and the action which the committee proposes to take. The notice shall either include details of such proposed action, or where such proposed action, as in the case of proposed assignments of classifications to identified waters, is too lengthy for publication, as hereafter provided for, the notice shall specify that copies of such detailed proposed action can be obtained on request from the office of the committee in sufficient quantity to satisfy the requests of all interested persons.

(2) Any such notice shall be published at least once in one newspaper of general circulation circulated in each county of the State in which the water area affected is located, and a copy of such notice shall be mailed to each person on the mailing list required to be kept by the committee pursuant to the provisions of Section 143-215.4.

(3) Any person who desires to be heard at any such public hearing shall give notice thereof in writing to the committee on or before the first date set for the hearing. The committee is authorized to set reasonable time limits for the oral presentation of views by any one person at any such public hearing. The committee shall permit anyone who so desires to file a written argument or other statement with the committee in relation to any proposed action of the committee at any time within 30 days following the conclusion of any public hearing or within any such additional time as the committee may allow by notice given as prescribed in this Section.

(f) Final Adoption and Assignment of Classifications: Upon completion of hearings and consideration of submitted evidence and arguments with respect to any proposed action of the committee pursuant to this Section, the committee shall adopt its final action with respect thereto and shall publish such final action as part of its official regulations. When final action has been adopted and is published with respect to the assignment of classifications applicable to the identified waters of any one or more watersheds within the State, the committee shall likewise publish as part of its official regulations, the effective date for the application of the provisions of Section 143-215.1 and 143-215.2 of this Article to persons within such watershed or watersheds.

(g) Committee's Power to Modify or Revoke: The committee is empowered to modify or revoke from time to time any final action previously taken by it pursuant to the provisions of this Section, any such modification or revocation, however, to be subject to the procedural requirements of this Article.

STATE OF NORTH CAROLINA
STATE STREAM SANITATION COMMITTEE
STATE BOARD OF HEALTH
RALEIGH, NORTH CAROLINA

L E G A L N O T I C E

Notice is hereby given, pursuant to Section 143-215, General Statutes of North Carolina, that a public hearing concerning pollution of the waters of the Neuse River Drainage Basin and the assignment of classifications to said waters will be held in the Mayor's Courtroom, 2nd Floor, City Hall, Goldsboro, North Carolina, beginning at 10:00 A. M., EST., Thursday, June 25, 1959.

The waters to be considered for classification during this hearing include that portion of the Neuse River from the source to the Wayne-Lenoir County Line, those portions of Nahunta Swamp from the source to the Wayne-Greene County Line, Contentnea Creek and Toisnot Swamp to the Wilson-Greene County Line, and all of their tributaries comprising the Neuse River Drainage Basin from the sources to the aforementioned county lines. These waters border on or flow through the counties of Durham, Franklin, Granville, Johnston, Nash, Orange, Person, Wake, Wayne, and Wilson.

All persons interested in the classification of the waters in the area designated are invited to attend and take part in the discussion. Persons desiring to be heard should give notice thereof in writing to the Committee on or before the date of the hearing. It is requested that, insofar as possible, any person desirous of offering lengthy comments and discussion in regard to the proposed classification of the streams be prepared at the public hearing to offer a written statement to be included in the record of proceedings.

Additional information and copies of the proposed classifications are available in the office of the Division of Water Pollution Control, State Board of Health, Raleigh, and may be obtained upon request.

STATE STREAM SANITATION COMMITTEE

E. C. Hubbard

E. C. Hubbard, Secretary

PROCEEDINGS AT PUBLIC HEARING HELD IN
GOLDSBORO ON JUNE 25, 1959

Note: (The hearing, for the purpose of considering the proposed stream classifications for the Neuse River from the source to the Wayne-Lenoir County Line, those portions of Nahunta Swamp from the source to the Wayne-Greene County Line, Contentnea Creek and Toisnot Swamp to the Wilson-Greene County Line, and all of their tributaries comprising the Neuse River Drainage Basin from the sources to the aforementioned county lines, was called to order in the Mayor's Courtroom, 2nd Floor, City Hall, Goldsboro, N. C., at 10:15 A. M., with approximately 40 persons present, including the following members of the Committee: J. V. Whitfield, Chairman; Mrs. Karl Bishopric, Vice-Chairman; Scott B. Berkeley; H. Grady Farthing; P. Greer Johnson; B. C. Snow; T. B. Upchurch, Jr.; and J. N. Vann. Members of the staff present were: E. C. Hubbard, Director, Division of Water Pollution Control, and Secretary to the Committee; William R. Clary, Chief, Stream Study Section; J. C. Millsaps, Sanitary Engineer, Stream Study Section; Julian R. Taylor, Chemist, Stream Study Section; T. F. Armstrong, Sanitary Engineer, Pollution Control Section; A. C. Turnage, Sanitary Engineer, Pollution Control Section; and Mrs. Marjorie T. Carmichael, Recording Secretary.)

Senator J. V. Whitfield, Chairman, State Stream Sanitation Committee, Wallace, North Carolina, Presiding: The meeting will please come to order. We are delighted to be here with you folks from Wayne County and surrounding counties, from the source of the Neuse down to Wayne, and any others who have dropped in to look at us in action. We've been a long time getting here, ladies and gentlemen, but it takes a long time to get the truth, and Hurricane Hazel delayed us nearly a whole year. Because right at the time we were taking samples, we had to stop because we can't take samples after the water gets too cold. I've always enjoyed staying at your hotel here - one of the best in the State - and I found this on my dresser this morning, which I think is very, very fine for every hotel to have: "A prayer for the stranger within our gates. Welcome traveler. In ancient times there was a prayer for the stranger within our gates. Because this hotel is a human institution to serve people and not solely a money-making organization, we hope that God will grant you peace and rest while you are under our roof. May this room and hotel be your second home. May those you love be near you in thoughts and dreams. Even though we may not even get to know you, we hope that you will be as comfortable and as happy as if you were in your own home. May the business that brought you our way prosper. May every call you make and every message you receive add to your joy. When you leave, may your journey be safe. We are all travelers - from birth till death we travel between the eternities. May these days be pleasant for you, profitable for society, helpful for those you meet, and a joy to those who know and love you best." - Maulty A. Stansberry, Hotel Goldsboro.

In a way we are strangers; in another way we are not strangers to you. We come to assist you. If any of you are nervous and wonder what's going to happen to your industry or your municipality, let me tell you that we haven't come here to put you out of business. We have come here to help you stay in business. We have come here to help the City of Goldsboro and surrounding areas to protect their water supply and make it useful.

I don't care how much water there is; if it's not usable, it is valueless. Down through the years along history's highway, nation after nation has risen and fallen; and from an economic standpoint one of the greatest contributions to the downfall of nations is poor conservation, failing to take care of its water supply, failing to protect itself by preserving one of nature's greatest commodities. Because when you lose your water supply, you are in danger of becoming a "has-been" nation, a nation of the past. Archeologists will tell you that. So let's remember that. Fortunately, North Carolina woke up before it was too late to put its house in order from the standpoint of water.

You might be interested to know that this nation used 41 billion gallons of water a day in 1900. In 1945 we used 150 billion gallons of water a day. In 1957, just twelve years later, we used 250 billion gallons of water a day. Now water engineers tell us that in 1980, at the present increase of our population and our industrial growth, this nation will need a minimum of 400 billion gallons a day, and it could be 600 billion. Now I'm not giving you those statistics just to alarm you; I'm giving you those facts to let us prepare ourselves and protect one of our greatest commodities - water.

We have been three years in preparing the report for the Neuse River Basin. It takes a long time. We can't just hang a map up on the wall and look at the streams there and say, "We'll classify this and that and this way." We've got to know every mile - what's in every mile of that water, where the pollution is greatest. Then we've got to decide for what that water shall be used, and give you the classification that will protect it.

We Americans are great destroyers under the guise of freedom, do-as-you-please liberty. The Europeans marvel at how little attention we pay to the law. If we can get by without breaking the law, that's all right, nothing wrong about that. We pass laws and deliberately break them, like a fellow who votes for prohibition and then goes around the corner and starts drinking, undoing the very law he helped put on the statute book. Now don't misunderstand me. I'm not making a temperance talk this morning - just want to illustrate the point.

So now, ladies and gentlemen, we have reached the point in our economic growth when we see the value of water; and that's why we are here this morning, to give you the classifications that we are suggesting for the Neuse River Basin from its source down to Wayne County. If you think the classification that is suggested for a stream of interest to your industry or your town along that route should be changed, give your reason. If you think it should be lowered or raised, give your reason, and we will study the facts in the case as you present them; and if we find that it can be done, we will change the suggested classification accordingly.

If I remember correctly, we have classified over half of the streams of North Carolina, and I believe we have only lowered one classification that we assigned. We have raised quite a few at the request of people from industries and municipalities that we have previously classified. Another thing that we are proud of is the fact that we have classified over half the streams of North Carolina and we haven't had to hail anybody into court. Now that doesn't mean if we had wanted to be technical we couldn't have done it. We could have hailed them into court, but you don't get very far by trying

to get into court except by a very, very last resort. As a matter of fact, we have thrown the law out the window. We don't even think about hailing anybody into court. You say that's a strange statement for a law enforcing agency to make. But let me say this, we can bring it back in through the window mighty quickly if you make us. So remember, that whether you go into court, whether we have to take you into court, depends entirely on you. We are doctors of sick streams. We are happy to sit around the table with you, discuss your problems, and help in any way we can. We are not a punitive committee; we are not a punitive board of any kind; and we would be just as sorry as you if you compelled us to use force to use the law. People can get together much better and progress much further if they will cooperate. So with those introductory remarks, just relax now and hear the story; but first I'm going to let the distinguished Mayor of your Town introduce the Committee. That's usually my job, but I want him to introduce the Committee, since we are having this hearing in his Town. Mayor Berkeley, will you please introduce the Members of this Committee.

Mayor Scott B. Berkeley, Member, State Stream Sanitation Committee, Goldsboro, North Carolina: Mr. Chairman, Members of the Committee and our friends from Eastern Carolina from the banks of the great Neuse River, let me say first as is the custom of all mayors, that we are indeed gratified that you are all here. We are grateful to the Committee for having selected Goldsboro as the site for conducting the hearing in this portion of the Neuse River Valley; and I'm going to say that I have had the very real and sincere pleasure of serving with the Members of this Committee from its organization; and I'm honored to present our people here, starting with my dear friend Vivian Whitfield, the Chairman - everybody knows Vivian, the Senator. And continuing, we have Mrs. Karl Bishopric, the Vice-Chairman of our Committee; Mr. Tom Upchurch, Member of the Committee; Mr. Grady Farthing, Member of the Committee; Mr. Joe Vann there to the left of our Chairman; Mr. Greer Johnson; and Col. B. C. Snow, who are here with us to seek the help of you people in the job we are trying to do. Frankly, as the Chairman has just said, that's our purpose and the raison d'etre - is that right? - only French I can remember, raison d'etre (reason for being) - I think that's all the French I know. And if I may, I will presume upon the time of our people here and this Committee to present some of our official family in Goldsboro. I'd like to present our City Manager, Mr. L. Page Benton, and our City Engineer, Mr. E. Grip Porter. I'll tell you a little secret about Grip: he helped build the Panama Canal. His father was the contractor who built this City Hall, this part we're in now; and Grip was the timekeeper on that job. His father was a former distinguished Mayor of this good City, and Grip here was Mayor of this City at one time. So we are bound to love Grip. We have our Superintendent of our water plant here, Mr. Ellis King, and his assistant, Mr. Royall. I shall not trespass upon your time further, and I appreciate the honor you've done me, Mr. Chairman.

Chairman Whitfield: Thank you, Mr. Mayor. We are very glad also to have the distinguished Senator from Goldsboro whom we all know and who himself is one of the South's great conservationists. No man is interested in water more than Senator Rose; and he has been trying to protect you, getting ready to protect you, and is ready to protect you at any time.

We also have here certain members of our staff. We couldn't bring them all, you know. Somebody had to keep house at home in Raleigh, so we couldn't

bring them all. We have Mr. Clary of our staff; and Mr. Taylor is back here; Mr. Millsaps over there; Mr. Turnage and Mr. Armstrong back there; and of course we couldn't run this without Mrs. Carmichael, our very efficient secretary. She knows all the answers when we don't. She knows our idiosyncrasies, too. And then we have, of course, our very able Executive Secretary. Mr. Hubbard is one of the ablest men in water and in the profession of water sanitation anywhere to be found. Now he's going to take over the next phase of our meeting. Let me say that certain things we have to go through with may sound drab, complying with the law, of course, but are highly essential. Any lawyer will tell you that. But I don't know of anybody that can make anything more interesting, in regard to some of the things we have to do to comply with the law, than Mr. Hubbard in this next phase. So bear with us till we get to the point you want to know: what's the classification of that part of the Neuse River Basin of interest to you. So now I'll turn the meeting over to our Executive Secretary, Mr. E. C. Hubbard.

Mr. E. C. Hubbard, Director, Division of Water Pollution Control and Secretary to the Committee: Mr. Chairman, Members of the State Stream Sanitation Committee, ladies and gentlemen. As the Chairman just got through telling you, there are certain parts of this program that may seem repetitious to some of you who have attended other hearings of this type. But this phase of the program is a necessity; and, while we will try to make it as short as we can so as not to bore those who have heard it before, I think that those who have not heard it will be interested, and maybe some of those that will hear it for a second or third time will still get something from it. Senator Whitfield has expressed the appreciation of the Committee for your presence here this morning, and I would like to also express appreciation of the staff, because it encourages us to know that you are interested in the problems inherent in maintaining clean waters in the Neuse River Basin. I can assure you, therefore, that we appreciate your interest and particularly your assistance and sympathetic understanding of the problems confronting the Committee and those who are involved in the pollution abatement activities, or who will be involved in such activities. The hearing this morning represents the first of two hearings that will be held in the Neuse River Basin for the purpose of explaining to you our findings during more than two years of studies to determine sources of pollution, their magnitude, and what effect they are having on our water resources. The second hearing will be held tomorrow morning in New Bern. Perhaps some of you would like to go to New Bern and attend that hearing also where you would hear approximately the same thing but translated to the lower portion of the Basin. Now, as indicated in the public notice that was published in each of the newspapers throughout the Basin, the area to be covered by this morning's proceedings is as follows: It does not cover the whole River Basin, but covers this portion that you see on the map before you. I will more clearly define that so that you will know exactly what portion of the Basin we are concerned with. It covers the main stem of the River from its source to the Wayne-Lenoir County Line, Nahunta Swamp from its source to the Wayne-Greene County Line, Contentnea Creek and Toisnot Swamp from their sources down to the Wilson-Greene County Line, and all of the tributaries comprising this upper portion of the Neuse River Basin. These waters either flow through or border on Durham, Franklin, Granville, Johnston, Nash, Orange, Wake, Wayne and Wilson Counties.

The findings of the detailed studies that are contained in the Neuse River Basin Pollution Survey Report have been published after a great amount

of tedious work on the part of the Stream Sanitation Committee Staff. Some of you, I'm sure, who have been involved in such studies, will realize the vast amount of work that's required to accumulate and then compile the data contained in this report. The results as presented in the report include information concerning the human and industrial waste disposal facilities and outlets to the waters of the River Basin, the laboratory analyses of many hundreds of samples that were collected throughout the Basin, and other data that were obtained from conferences and investigations with various officials throughout the Basin. We certainly hope that you have had an opportunity of studying the report, particularly the findings and the recommended classifications, so that you will be in position this morning, not only to understand some of the technical aspects that will be duscussed but so you will be in position to give the Committee the benefit of any suggestions or recommendations that you may have. This we want to truly be your hearing. It's held for the purpose of giving you an opportunity of telling the Committee what you would like to have in terms of water resources throughout the Neuse River Basin. We implore and invite each and every one of you who may have a comment to make to feel free to do so, and you will be given that opportunity as a part of the proceedings.

We have, therefore, divided the hearing into three portions. The first portion will involve the portion that I have started, that of explaining to you some of the policies of the Committee and some of the legal requirements which the Committee must follow in accomplishing its program, so that you will understand the circumstances under which the Committee has come to you for advice, and then the circumstances under which the Committee will endeavor to carry out its program.

The second part of the hearing will consist of a presentation of our factual findings. That portion will be conducted by Mr. Clary who is the Chief of the Stream Study Section and who is thoroughly familiar with the sources of pollution, the water uses, and the circumstances surrounding the problems within the basin. He will also, during that portion, present to you the classifications that are suggested for the several waters within the area of the Basin under consideration.

At this point I think it would be well, because I am sure that this problem is on some of your minds, to point out to you that the purpose of this hearing is not to try to tell you, either a municipality or an industry, what will be required in relation to pollution abatement at any particular point of pollution. Your pollution abatement needs, if you have such needs, can only be determined fairly after the Committee has determined what the classification is going to be. That can only be accomplished after we have had your advice and your recommendations. Therefore, it would be presumptuous on our part at this time to try to tell the City of Goldsboro exactly what they have to do in cleaning up their pollution problems, or the City of Raleigh, or any other industry or municipality within the Basin. Therefore, we will not attempt to discuss in detail or in particular any source of pollution in terms of pollution abatement needs. That will come later. Each of you was given a blank form when you entered the room. I hope that most of you have completed the form, have passed it up to the front, and have indicated your desire or your lack of desire to make comments this morning. That form is for the purpose of giving you the opportunity of telling us that you would like to be heard, so if there are any in the room who have not completed the form, we would appreciate your doing so and handing it to Mr. Armstrong or

Mr. Turnage, or some of us so that when we get to the portion of the hearing during which we will recognize persons who wish to speak, we will have the information and will not skip anyone. Now, as I mentioned a minute ago, there are certain policies and procedures which are required by the Statute, to be followed by the Committee in conducting hearings of this sort and in carrying out our program. I think it will be of interest to each of you to know a little bit about what those policies and procedures are. I think if you do, you will understand and have a more sympathetic attitude toward our program than you could otherwise.

The first requirement as set forth by the General Assembly in the Statute specified that the Committee should develop and adopt a series of classifications and their accompanying water quality standards which would be used in classifying the various waters of the State according to a present or a predominant future usage. Such a series of classifications and standards were adopted in the fall of 1953 after considerable study, and after considerable advice by a special Committee who helped develop the classifications and particularly the water quality standards applicable to each classification. These have been fairly widely distributed at one time or another; however, we have copies with us, and if there is someone here this morning who would like to have a copy, I wish you would make that fact known. I expect right now would be a good time; and if any of you would like to have a copy of the classifications and standards, hold up your hand and we will supply you with a copy.

I will not attempt to discuss in detail those classifications and standards, but I would like to say this: there is a separate classification for each dominant water usage, and there are water quality standards applicable to each classification; so that if we classify a stream as a source of public water supply, the water quality that must be maintained in the stream is specified in the pamphlet. If there are any questions at any time during the proceedings that you would like to raise with regard to the classifications and standards or any other portions, we would be glad to attempt to answer the questions.

The second phase of the program relates to the conduct of detailed and comprehensive studies of the waters under consideration to determine the various sources of pollution, their magnitude, the dominant water usage, the present quality of the water in the streams and other factors that help us determine what classification should be assigned or how much pollution abatement activity will be required to meet certain classifications, depending upon those which may be assigned. This, as I have mentioned before, is obviously a time-consuming program. It's necessary to collect and examine an appropriate number of water samples from each of the sampling stations that are located in the river basin, and we normally locate sampling stations above and below each source of pollution, as well as at certain other selected points where water quality information is desired. As you might expect, this results in an extremely large number of samples. These samples collected from the sampling stations tell us the present quality of the water; and, therefore, when the streams are classified, they indicate the difference in quality or how much improvement must be made in order to comply with the particular classification which may be assigned to the particular stream. We also obtain information concerning the present usage, such as for public water supply, bathing, recreation, fishing, and for the other numerous usages that are made of our water resources. With this information and with the

advice that is obtained from the public hearings, the Committee is then better able to classify the streams in such manner that the quality will be maintained suitable to meet the requirements of the public. That is the intent of the program, to maintain the water suitable to meet the water needs of the people of the State. We have just recently, as mentioned by Senator Whitfield, completed the detailed study portion of the program, and it has been published. You have received copies; and this morning an attempt will be made to explain our findings, not in detail, but in general, particularly with reference to sources of pollution of such magnitude as to be creating a particular hazard at the present time.

The third portion of the program involves the holding of public hearings, such as the one we are holding today, during which you, the public, are given an opportunity to tell the Committee what you would like to see done with your water resources.

The fourth step in the program, and that's the one a number of you by necessity must become very much interested in, is that of assigning classifications and water quality standards with reference to water usage. Likewise, it's one of developing a comprehensive pollution abatement plan to be followed by those who are contributing pollution in the abatement of any excessive pollution of the waters of the Basin. In this connection, some of you perhaps have seen some of the Comprehensive Pollution Abatement Plans that have been developed for other river basins; but if you have not, I would like to say to you that the plans are developed in such manner as to provide for voluntary cooperative compliance with the requirements. We believe that is the best method of obtaining the goal set by the Committee in terms of water quality. We have been most fortunate thus far in that we have classified about half of the waters in the State, and we have very constructive programs of pollution abatement under way by both industries and municipalities, and as yet we have not been placed in the position of asking the Committee to issue a single order requiring pollution abatement. It's been done thus far on the basis of mutual cooperation and understanding. We believe that is the North Carolina way of accomplishing goals. We believe it is the proper approach, so long as the approach is adhered to. In the event the voluntary approach is not adhered to, then the Committee is required by the Statute to issue special orders and enforce such special orders. We, of course, hope that such action will not be necessary, but if it should become necessary to issue and enforce special orders, it has been my observation that the Committee will not hesitate to do so in carrying out its responsibilities to the people of North Carolina in relationship to the overall protection of the water resources.

To some of you these next few statements may come as a surprise, and then again they may not. I'm sure they will not for a great number of you, but I would like to point out to you that in studying the Neuse River Pollution Survey Report or any of the other Survey Reports that we've issued, it should be borne in mind that the measurement of the effects of waste discharges upon a stream is made difficult, very difficult in fact, by the varying characteristics of different wastes and the varying requirements of water quality for different usages. Irregular stream flows also make our problem more difficult. The effects of tidal action influence the problem of pollution abatement; and also and to our sorrow, the lack of simple devices and units for measuring the effects of pollution complicates the problems for those of us

who are involved either with the stream sanitation program or with compliance with pollution abatement plans. It is not a simple matter to determine just what effects certain sources of pollution may have upon the various uses our streams must serve.

In this connection, I would like to point out that different types of pollution may impair our water resources in several different ways: first, pollution that increases the bacterial content of the stream, such as domestic sewage; second, pollution that reduces the oxygen in the stream, which may be caused by sewage or any other organic type of waste; third, pollution that introduces solids or liquids that tend to either settle or float, thereby creating sludge banks or causing unsightly conditions; and fourth, pollution that adds color. Some of our textile problems are involved with color that is most difficult to remove, but yet disturbs the public and creates conditions that are undesirable from the standpoint of being unsightly. Also, some of the waste may cause turbidity, or acid waste may change the nature of the stream to the extent of being detrimental to fish life or to other aquatic life. Then we may have wastes that actually change the circumstances and adversely affect the stream from the standpoint of actually being poisonous to fish life or to other animal life that may use the water or may drink the water. For instance, metal plating wastes are quite often associated with materials that are toxic or poisonous in nature, where only a very small amount will destroy fish or may kill animal life using the water as sources of drinking water. Some of these pollutional effects may become apparent immediately below the point of discharge, as in the case of floating solids or colored materials, or they may not show up for several miles downstream. Likewise, some of the pollutional effects persist for a very short distance, whereas others may persist for miles and even hundreds of miles downstream. So we may be affecting the Neuse River here by materials that are discharged twenty or thirty or forty miles upstream, if the type of waste is of the nature that is not destroyed by natural stream purification before it reaches the City of Goldsboro.

The seriousness of any pollution problem is also influenced by the uses made of the waters. For instance a stream used as a source of public water supply would be more seriously affected perhaps by a source of pollution which increases the bacterial content of the water than it would if the stream was used only for agricultural purposes. Likewise, a stream used for fish propagation would be more seriously affected by a poisonous waste than it would by a waste that would just simply increase the hardness or add a small amount of color. I hope I am impressing you with the complexities of the problem because there are many things that affect the quality of water and make our problem really one of complex nature. The problem is also affected by stream flow. This is the problem in which Senator Rose has been interested for some time, that of controlling stream flows. The volume of water flowing in a stream receiving discharges of sewage or industrial waste is the prime consideration in determining the amount of pollution a stream can carry without harmful effects; and, therefore, greatly influences the pollution abatement needs at any particular source of pollution. Also, the existing quality of water in which the pollution is discharged has an effect upon how much treatment will be necessary not to damage the stream beyond that which is acceptable. In arriving at the amount of pollution that can be safely discharged into a given stream, these characteristics, together with the other factors such as flow regulation by dams, tidal effects, etc., must of necessity be thoroughly studied before a reasonable and fair pollution abatement plan can be developed.

As you know, under natural conditions streams will vary in flow from time to time throughout the year. This variation may be over a wide or a narrow range. However, high flows usually occur during the winter and early spring months when the temperatures are low, and therefore the oxygen saturation content of the water is rather high and the situation is pretty well taken care of; whereas in dry weather at low flows which normally occur during the months when we have hot weather and worse conditions, the temperature is high so that our problem becomes critical during those periods. Yet we know, Senator Rose, that we are going to have dry years, and we are going to have wet years; and there's not much we can do about the rainfall. But there is something that can be done about the control of low flows in our major streams. We can install catchment areas which will catch and hold the water during times of high flow and discharge it during times of low flow, and thus take advantage of the higher flows in terms of reduced necessity of waste treatment facilities, or in terms of being able to add more waste without destroying the benefits of the stream. But in view of these characteristics which we must face and in view of the fact that our worse conditions exist under low flows and at high temperature conditions in the summertime, we must provide waste treatment not to protect the streams during the beneficial flows in the wintertime, but we must provide treatment adequate to protect the stream in keeping with water quality standards during the most critical months when we have the lowest flows and warmest weather. This is an expensive proposition, but there's no way to get around the problem other than by assuring an improved flow condition in the stream. In constructing dams or reservoirs to hold water that falls during time of plentiful rainfall, then discharging it during times of drought, we must take into consideration that under certain conditions water stored in reservoirs will be degraded in quality by natural forces, or that in some cases our reservoirs are not designed and operated to provide a specific minimum flow. Some reservoirs are operated in such manner as to absolutely cut off all of the water at times of the year, and of course that leaves the people downstream without sufficient water for use or without adequate water for diluting waste and sewage. Therefore, it is important in considering the construction of any reservoir or the building of any dam, to provide in the procedure of operation for the maintenance of minimum flows and to provide physical features within the dam to lessen the degrading characteristics of water stored in large reservoirs. That problem has already been confronted in the case of certain reservoirs within the State, and it has brought very vividly to our attention the need for supervision over the design and construction of such installations; but with that supervision we can take the maximum advantage of the amount of water that we have available to us by putting it in the bank in times of plenty and checking on it during times of low flow or drought periods.

Now I would like to say something about stream uses which I think will be of interest to you and may surprise some of you, particularly in relation to what I'm going to say in connection with disposal of waste and sewage. We have many valid and proper uses of our streams which are reasonable in the interest of the public. These uses must include, and it is probably the highest usage, that of the stream serving as a source of public water supply. That's one of the uses we must make of our streams, and we must keep the required waters clean enough to satisfy that need. The next use is that of recreation, bathing and other recreational sports. The next is that of maintaining suitable quality of water for fish and the propagation of fish life. When we say that it should be suitable for fish and fish propagation, we are including that fact that the quality should be such as to provide an

environment that will not only allow the fish to live, but will assure that fish food will be provided to the extent of supplying the food necessary for the fish. Without the food, we don't have fish, regardless of the quantity of water we may have. We must also use our streams as sources of water for irrigation, for livestock watering, and for other similar agricultural purposes. We must use it for navigation; we must use it for power production; and finally - this may surprise some of you - we must use it as a vehicle for disposing of our industrial and municipal wastes. Our industrial and municipal wastes are simply used water, sometimes quite seriously used and maybe abused, but there is no place to dispose of these wastes except by discharging them back into the stream from which they were taken, or to another stream. The problem, therefore, becomes one of treating a waste to the extent that when it's returned to a stream, it will not lower the quality below that required to maintain the usage necessary in the public interest.

These multiple uses, therefore, constitute a problem and must be reconciled to the extent that one usage, although opposed to others, will not interfere too seriously with other necessary and desirable uses. Now in the selection of the recommended classifications, we have attempted to recognize that there is a conflict, for instance, between the use of water for sewage and industrial waste disposal and for other beneficial uses. Yet, we have also recognized, as I've mentioned before, that we must discharge our wastes into the streams from which they originally were taken, or into another stream.

That sums up about as well as I can the objectives of the Stream Sanitation Program, recognizing the needed uses along with the fact that we have uses that oppose each other. The program, therefore, boils down to one of reconciling these various uses, one to the other, to the extent that we will not destroy our natural resources, and particularly the one that we cannot live without. We can live about two or three months without food, but we can live only a few days without water. Therefore, water has been said to be as important as our air to the human race.

Our data, that will be presented to you concerning the present and potential future uses of water for public and industrial water supplies, for sewage and industrial waste disposal and other purposes, were obtained through actual field investigations. We sent people out who made investigations to determine what streams are being used for the purposes just mentioned. Our information concerning the uses of our water resources for bathing and recreation was obtained from our County Health Departments and from our Division of State Parks and the Department of Conservation and Development. Data on uses pertaining to fish and wildlife were obtained from the North Carolina Wildlife Resources Commission. The Farm Agents were interviewed to determine what streams were used as sources of agricultural water supply and to what extent those streams were being used for agricultural irrigation.

We found something in the River Basin that I will mention just in passing, that if we utilized all of the irrigation pumps in the Neuse River Basin that have been approved or permits have been issued for, to their maximum capacity, in many cases we would pump more water from the stream than there is flowing in the stream. That is a usage, too, that must be reconciled. Fortunately, everybody doesn't turn his pump on at one time; and, therefore, perhaps we are getting a reasonably good flow or a reasonably near-normal flow in the stream, but we can pump all of our water out for irrigation purposes and thereby destroy the other uses of a particular water resource.

Incidentally, irrigation is a consumptive use as versus a nonconsumptive use. About 80 percent of the water that's used for irrigation does not return to the stream, but is taken up in transpiration and evaporation; and, therefore, so far as the downstream flow is concerned, it is not provided for the downstream users.

Data concerning power generation was obtained from the power companies, while the information concerning other related uses was determined through interviews with interested people and from such other sources as were obtainable.

We believe, and this is a sincere belief, after two or three years of studying the Neuse River Basin that we have obtained the best information that was possible to obtain from the best sources available to us for obtaining such information. We believe, therefore, we have a fairly good index, and that a fairly good index of water uses in the Neuse River Basin is presented in this Neuse River Basin Pollution Survey Report. We recognize, though, that there may be some beneficial and necessary uses that have been overlooked or that are not specified or mentioned in the report. If that has occurred, it's been entirely unintentional, and we invite all persons who are in attendance here today to bring to the Committee's attention any oversight that may have occurred in connection with water uses.

This, as I said in the beginning, is truly your public hearing. The Committee, as Senator Whitfield has mentioned over and over again, is simply a servant to the public. We are trying to do the job that you wish to be done in relationship to one of the most important resources of the nation. Therefore, we do not want to leave here today until we have heard any comments that you may wish to make. I can assure you that without your assistance, your comments, your advice, your criticism, your Stream Sanitation Program will be a weak one at best. It's designed for your benefit, not for the benefit of the Committee, and for you to obtain the maximum benefits we must have your advice.

This, Mr. Chairman, completes this portion of the hearing, and I hope it will enable those present to understand better some of the problems that confront the Committee and the Committee's staff as well as some of the problems that will confront the municipalities and industries who have to face up to the problem of providing waste and sewage treatment.

Next we will hear from Mr. Clary, who will discuss the pertinent facts concerning sources of pollution, water uses, and suggested classifications. Mr. Clary will not have time to discuss in detail all of the sources of pollution, nor will he have time to name every stream or every segment of stream that has a different classification; but I think it is his intention and will be his purpose to discuss the significant pollution that's causing problems in the Neuse River Basin or in this portion under consideration, and that he will point out by use of the map the various areas and the classifications for the streams in those areas. At this time, Mr. Chairman, unless you would like to interrupt the proceedings, I would like to call on Mr. Clary to discuss the technical aspects of the report findings.

Chairman Whitfield: Just a minute. Senator Rose, do you want to say something?

The Honorable D. J. Rose, State Senator, Goldsboro, North Carolina: Mr. Chairman, at this point I would like to ask Mr. Hubbard two questions.

Chairman Whitfield: Yes, sir.

Senator Rose: First, will the classifications meet the standards of the United States Corps of Engineers in regard to dams for creating reservoirs in relation to pollution in the water?

Mr. Hubbard: Will you restate that Senator? I missed some of it, and I'm not clear on just what you're asking.

Senator Rose: Well, I'm sure Mr. Snow could answer the question right off from his experience with that august body for many years. To reiterate, will the classifications of the streams in the River Basin meet the requirements of the United States Corps of Engineers in relation to constructing dams for the purpose of reservoirs?

Mr. Hubbard: I'm sure that they will, Senator Rose. One of the problems that we have been faced with in the construction of reservoirs is that of natural degradation of water quality within the reservoir due to thermal stratification, and unless there are physical provisions made to assure that the highest quality of water available is discharged, and that's usually the water that's lying in the top twenty feet of the reservoir, then we may have issuing from a very beautiful reservoir water containing no oxygen whatsoever. My intent in mentioning that point was to impress upon those of us present the importance of proper planning in relationship to Corps of Engineers reservoirs or in relationship to any private power company reservoirs. I certainly am not opposed, and I thoroughly advocate this matter of banking our resources during times of plenty to be used during times of drought. I think, though, that we need to very carefully evaluate the circumstances in such manner that we can assure that the project will accomplish in all of its facets the objectives that we seek, not only in terms of quantity of water that may issue from the dam, but in terms of quality as well.

Mr. Rose: Now I would like to ask one other question.

Chairman Whitfield: Yes, sir.

Senator Rose: In giving consideration to life of animals, fowls, and fish, we farmers have given consideration to spreading of disease in plant life. I refer to vegetables and tobacco where hundreds and millions of dollars even in our Basin are lost each year. I don't think that our crops can bear to be exposed to the spreading of disease to plants by polluted irrigation water. Do the standards cover this situation?

Mr. Hubbard: By either bacterial pollution, or fungi, or poisons?

Senator Rose: Yes, sir.

Mr. Hubbard: Our standards specify that the water shall be maintained suitable for irrigation purposes. That covers a wide range of needs. One is in terms of quality suitable for irrigating food crops that are usually or may be eaten raw. There's where your bacterial pollution would come in. Then we may have conditions in such waters that would create a growth or a condition that would destroy the plants themselves. All of that is taken

into consideration, and the standards are written general enough to provide for that type of protection. In the development of the Standards and Classifications we asked the Agriculture Department, "What quality of water must you have to make it suitable for irrigation purposes?" We have as yet to receive a complete and detailed answer. We have likewise asked the fish people, "What is the minimum quality of water that you must have in order to maintain fish life?" There appears to be no specific answer to these questions. You will find that we have written the standards in such manner as to give the Committee latitude in making decisions and in developing or construing the standards as the problems in that relationship may occur. We do not have specific, detailed standards that are available to us from the Department of Agriculture, or the fish and wildlife people to tell us exactly what quality of water we need for those purposes.

Chairman Whitfield: Any further question you would like to ask now, Senator? Thank you, Mr. Hubbard. Before Mr. Clary begins, I'd like to point out one or two things, particularly as to the supply of water. Mr. Hubbard showed you what would happen if everybody started an irrigation pump right now with all those pumps that are in the Neuse River Basin. What would happen? There are more pumps to pump the water out than there would be a supply of water. Now in finding ample supplies of water we must realize that there are certain research projects that must proceed immediately. One of the first is to put into tiptop shape every watershed in the State of North Carolina so that they will help produce the maximum supply of water that a watershed can produce. It might interest you to know that 9 times the amount of moisture passes over this continent from the Pacific to the Atlantic every year than we get water from. In other words, we get only one-tenth of the water that passes over our heads in this continent from the Pacific to the Atlantic. So research is due to find out if we can get some of that moisture in the form of rain when we need it. That will take time and will take brains, I guess you'll agree with me on that. All right, suppose we find out how to get that water, then we have another problem which makes it complex. What effect, if we get more water than our one-tenth from those clouds, would it have on global precipitation? So you see it's a very intricate pattern. Now we hope that when nuclear power gets cheaper, we can get water from the sea at a reasonable rate. Of course, we now know how to change sea water into fresh water - drinking water, but it is a very costly project. But the thing for us to remember is that we are going to get most of the water we need by cleaning up our streams and making it possible to use the water that we have over and over again. In this way we are utilizing to the maximum the supply of water that we already have. On the other hand, if we keep polluting without doing that, our usable water supply will grow less and less. We must have the facts; we must find the facts, which will require research upon research in order to obtain all the facts to present to you.

Now it's not always easy to do that. For instance, far-reaching decisions were required when the Union Bag-Camp Paper Corporation came to us for permission to construct a large pulp and paper mill on the Neuse River. Of course, we've given them the privilege to open a plant, a $75,000,000 pulp and paper mill between here and New Bern. It took us a year to find the site, and it was not easy to solve the water supply and waste disposal problems. They talked talk, and we helped them; and finally, after about a year or fourteen months, we agreed to kill a very attractive and useful sportsman's creek, where fish and game prevailed in large quantities, Batchelder Creek, seven miles long and somewhat west of New Bern. We agreed to sedimentation

and lagoon treatment of the waste, and to let them use the creek for the effluent and thus destroy the fish and wildlife that would be on that seven-mile-long creek. What were we trying to do? We were trying to protect the shad industry on the Neuse River. Now by the time their waste reaches the Neuse River and it is thoroughly mixed with the river waters, they will have to maintain the oxygen content of the water so as not to destroy the shad. So we have a $75,000,000 industry - whenever they start to build, I believe it is '61 now - and still have maintained also our shad fish industry in the Neuse River. So you see it is a very complicated problem.

This is not spectacular; it is humdrum, and one has to be dedicated to the task if such problems are to be solved. Sometimes we do have fun. The other day Mr. Hubbard and I were going up to Washington on a mission for the State Stream Sanitation Committee and the State - and the nation as far as that goes - to discuss the question of grants under the Blatnik Bill, and we were riding along, and all of a sudden - we had talked so we had forgotten where we were - he said, "We're in Virginia now", and I said, "No, we're not in Virginia. We haven't left North Carolina yet." So we got to arguing good-naturedly, and finally we saw this old negro woman on my side of the road, and I said, "Stop and let's ask her." So he pulls up and I put my head out the window, and I said, "Is this Virginia?" She said, "Naw suh, I's Lucy. Virginia, she lives overyonder." So we do have a little fun once in a while. Stream pollution control is a big problem but with your help and the help of all the other North Carolinians, we're going to solve this problem. Your problem represents 12 percent of the landed area of North Carolina, the Neuse River Basin - to be exact, 11.9 percent of the Neuse River Basin. Mr. Clary, will you explain our suggested classifications for the Neuse River Basin from its source down to the Lenoir County Line.

Mr. William R. Clary, Chief, Stream Study Section, Division of Water Pollution Control, Raleigh, North Carolina: Thank you, Senator Whitfield and Mr. Hubbard. Ladies and gentlemen, I believe you will be interested in a general summary of the Neuse River Basin Survey Report and a description of the whole River Basin before getting down to particular areas in which you will be primarily interested.

Now first, permit me to define two terms for you which appear throughout the report pertinent to this discussion. The first term is "B.O.D." The B.O.D. (Biochemical Oxygen Demand) of natural water, sewage and industrial waste is the loss of dissolved oxygen in five days at 20°C, that's room temperature of about 68°F of a sample in a sealed bottle. The loss of dissolved oxygen in the bottle is a measure of organic matter in the substance being tested. The second term "P.E." (Population Equivalent) is an expression designating organic matter in sewage, industrial waste and natural substances in water as the amount of B.O.D. (Biochemical Oxygen Demand) produced by an equivalent number of persons. It has been found that the daily activities of an individual result in the production of 0.17 lbs. of 5-Day 20°C B.O.D. The P.E. is determined by dividing the pounds of 5-Day 20°C B.O.D. produced by an industrial waste in one day for instance by 0.17, and expressing it in terms of people. In other words, if we have a pound of 5-Day B.O.D., it is equivalent to the waste from about six persons. This then becomes a useful tool to the sanitary engineer in designing waste treatment facilities and comparing sewages and industrial wastes. With this information in mind I will now proceed to give to you a brief summary of the report.

The Neuse River Basin encompasses a total area of 6,192 square miles and contains an estimated population of 564,000 based on the 1950 Census. There are 12 surface water supplies located within the Basin serving an estimated population of 245,000 with 26.5 million gallons per day. Also there are 40 public ground water supplies, serving an estimated population of 121,000 with 12.0 million gallons per day. In addition to this, industries other than generating plants have reported the use of 2.6 million gallons per day of water obtained from surface supplies and 3.8 million gallons per day from ground supplies. Four electric power generating plants obtain a total of 244.5 million gallons per day of water from various streams within the Basin which is used for cooling purposes. The most significant of these is the Carolina Power and Light Company's Goldsboro or Quaker Neck Plant, which uses 158.4 million gallons per day from Neuse River for cooling water at peak production. While no reports of fish kills below this plant reached this office during the low-flow period in the summer of 1954, the temperature of the water probably reached that which is harmful to fish survival. The location of this discharge is significant in that it is only 6.8 miles above a point where the City of Goldsboro proposes to locate a raw water intake at a future date. Duke Power Company's University Steam Station ceased production of power in 1957 and is now used only as a transformer station.

The Neuse River Basin contains 88 significant sources of pollution. Seven of these are quarries with wastes which are largely inorganic. The remaining 81 can be divided as follows:

Type of Treatment	No. of Points	Per Cent Overall Reduction
None	37	0
Primary	25	18
Secondary	19	77

The total overall reduction for the entire Basin is only 26 percent, based upon conditions existing at the time of the stream studies. These 81 points produced a total domestic sewage population equivalent (P.E.) of 494,237, of which 40 percent is from industrial waste.

Many industries and municipalities have adequate treatment facilities, but, because they have received little or no operation and maintenance, they are not achieving the reduction of which they are capable. Also, many municipalities and one industry have recognized their responsibilities to the State's water resources and have either completed improvements or have begun studies designed to provide facilities for reducing their portion of the pollution discharged to the streams to the degree necessary to protect their essential uses. The City of Durham has completed remodeling and enlarging their Northside Plant and has begun full operation, while the City of Raleigh and the Town of Farmville have constructed and put into operation new secondary treatment plants since the river studies were made. The City of Wilson and the Town of Ayden have treatment plants under construction. The following have employed engineers to begin study of their waste problems:

Wake Finishing Plant	Town of Clayton
Town of Selma	Town of Princeton
Town of Cary	City of Goldsboro
Town of Smithfield	City of Kinston

Pertinent pollutional problems located in the following areas are worthy of particular mention:

Hillsboro Area - The pollution in this area is created from three sources: Cone Mills Corporation Eno Plant, Belle Vue Manufacturing Company, and the Town of Hillsboro. These sources discharge untreated waste into Eno River and have a total (P.E.) of 2,616. This problem is increased during dry periods when little or no water is released from the impoundment located upstream of the Eno Cotton Mills and from the Town's new water supply impoundment. Class "A-II" is recommended above the Eno Cotton Mills' dam to protect Hillsboro's public water supply, while Class "D" is recommended for Eno River from the Eno Cotton Mills' dam to the dam at the University Steam Station.

Chairman Whitfield: Mr. Clary, you might ask if there's anyone here from the Hillsboro area. Just when you've finished one of these, you might ask if there's anybody who would care to comment or ask a question.

Mr. Clary: All right, sir.

Durham Area: Following the stream study on Neuse River, the City of Durham completed the enlargement and modernization of the Northside treatment plant. The effluent from this plant is partially discharged into Ellerbe Creek, while the remainder is discharged to Neuse River above the site of a possible future water supply for the City of Raleigh and the City of Durham which will supply water to the Research Triangle. Prior to the Durham sewage treatment plant modernization program, the plant effluent created very undesirable conditions in Ellerbe Creek because of the swampy and undefined nature of the stream bed. It is believed that conditions have improved since the modernization program; however, further improvement will be effected when the present program for draining the swampy land and improving the stream bed has been realized. In this connection, it is understood that the City and County have provided their share of the required funds, while the Corps of Engineers has yet to receive their allotment.

Incidentally, we do have representatives from Durham. Would you like to make yourselves known gentlemen?

(Representatives from Durham introduced themselves but did not come to the microphone - could not year introductions.)

Mr. Clary: Gentlemen, I'm in hopes that before the meeting is over you will mention briefly some of these steps you've taken. Now, it's very easy to say you've modernized your plant, but we make no mention of the cost to your fair City, and the good that it's doing other than just brief mention.

Now the effluent from the treatment plant at Camp Butner is discharged into Knap of Reeds Creek and reaches Neuse River just 1.5 miles above the pollution from Durham in Ellerbe Creek. Both Knap of Reeds Creek and Neuse River are seriously polluted by this effluent and corrective action is required by the State of North Carolina.

Class "D" is recommended for both Ellerbe and Knap of Reeds Creeks. Class "D" is also recommended for Neuse River for a distance of 12.9 miles from the confluence of Eno and Flat Rivers to the mouth of Little Lick Creek. Class "A-II" is recommended from this point to the Wake Finishing Plant water intake to protect both present and proposed public water supplies.

Wake Finishing Plant discharges industrial waste, which has a domestic sewage population equivalent (P.E.) of 48,000, into Neuse River after partial

treatment in two lagoons, and the effluent from a secondary-type sewage treatment plant which serves the plant personnel and the village. This waste not only increases the B.O.D. and the coliform bacteria (M.P.N.) in the stream but also increases the color, causing a very unsightly condition for a considerable distance downstream. This waste and those from Raleigh and Selma have materially affected the public water supply for the Town of Smithfield. Class "D" is recommended for Neuse River below the Wake Finishing Plant to the mouth of Beddingfield Creek.

We have representatives here from Burlington Industries. Would you gentlemen like to make yourselves known please?

(Representatives from Burlington Industries introduced themselves but did not come to the microphone - could not hear introductions.)

Mr. Clary: Thank you, sir.

Chairman Whitfield: Well now, as I said, stop at the end of each city or area. A person sometimes might want to ask a question, and everybody is going to be given a chance to say something later. Sometimes when anything's right there, you think of what you want to ask and you might not think of it a little later.

Mr. Clary: Raleigh-Smithfield Areas - Following the stream study in these areas, the City of Raleigh constructed and put into operation a secondary-type treatment plant which discharges into Walnut Creek. This creek also receives untreated wastes from Carolina Pines and Watson's Seafood and Poultry Company, and overflows from a sewage lift station in the Town of Cary. Due to inadequate pumps at the City of Raleigh's Crabtree Creek pump station, untreated wastes are discharged to Crabtree Creek during peak flows. The Town of Selma and Griggs Equipment Company are discharging untreated waste into Mill Creek which is only 2.6 miles above the raw water intake for the Town of Smithfield. While improvement has been noted at the Smithfield water supply since construction of the Raleigh waste treatment plant, much remains to be accomplished before this water supply will meet required standards. Action is also required by the Town of Cary to protect the Raleigh water supply.

I believe we have some gentlemen here from Raleigh, if you'd like to make yourselves known please.

(Representatives from Raleigh introduced themselves but did not come to the microphone - could not understand.)

Mr. Clary: Thank you, sir.

The Town of Smithfield is discharging untreated domestic sewage, and Carolina Packers is discharging partially treated industrial waste into Neuse River above the proposed water supply for the City of Goldsboro.

Anybody from Smithfield here?

Class "D" is recommended for Neuse River from the Wake Finishing Plant water intake to the mouth of Beddingfield Creek to allow for recovery of wastes from the Raleigh area. Class "A-II" is recommended from this point to the mouth of Little River to protect the public water supply for the Town of Smithfield and the proposed water supply for the City of Goldsboro.

Goldsboro Area - The wastes from this area, with partial treatment in only one case, have an estimated P.E. of 37,757, excluding the P.E. contained in the effluent from the treatment plant at Seymour Johnson Air Force Base. These wastes are discharged to Little River, Neuse River, Stony Creek, and smaller streams carrying storm flow to the river. Preliminary engineering studies of these waste problems have already been initiated by the City of Goldsboro. Class "D" is recommended for Little River from the State Hospital Water Supply to its mouth, and for all of Stony Creek. Class "C" is recommended for Neuse River.

Anybody from Goldsboro, please? The Mayor over here, I believe.

Chairman Whitfield: That winds up the discussion down to the Lenoir Line, doesn't it?

Mr. Clary: Now this thing here, Senator Whitfield, is a general summary of the whole report.

Chairman Whitfield: Yes.

Mr. Clary: I might just briefly speak of Kinston Area for general information of those who may not be in New Bern tomorrow.

Kinston Area - There are five separate significant sources of pollution in this area that discharge an estimated P.E. of 34,593 to Neuse River. These wastes, with the exception of one which receives partial treatment, are untreated and are discharged into a segment of the River encompassing a distance of six miles. In addition to this, the municipal power plant uses 17.0 M.G.D. of water for cooling purposes. This is discharged to the River with no apparent ill effects. Class "C" is recommended for Neuse River in this area.

Now briefly stated, New Bern Area - The City of New Bern discharges sewage and industrial waste, which has a P.E. of 14,777, into Neuse and Trent Rivers through eight separate outfalls. In addition to this, the New Bern Provision Company discharges partially treated wastes into Wilson Creek which is 4.8 miles up Trent River from New Bern. Class "SB-Swp." is proposed for Trent River from the mouth of Deep Gully to the mouth of Brice Creek, and Class "SC-Swp." is proposed to the mouth. Class "SC-Swp." is also recommended for Neuse River from New Bern to a point five miles downstream.

Union Bag-Camp Paper Corp. proposes to construct a Kraft Pulp and Paper Mill which will discharge 30.0 M.G.D. of waste, after treatment in storage and oxidation lagoons, into Batchelder Creek at a point approximately seven miles northwest of New Bern. Senator Whitfield has already discussed that.

Now up to here is just a brief outline of the main part of the Neuse River Basin Report.

We will now proceed into the summary discussion of the areas and recommended classifications in which you ladies and gentlemen by your presence here today indicate your particular interest.

Now before doing so, permit me to mention our six fresh water classifications as follows: (Mr. Hubbard spoke briefly of the stream uses. Now these streams uses are translated into classifications.)

Fresh Surface Waters:

A-I - Water supply from uninhabited watersheds requiring only approved disinfection.
A-II - Water supply with approved complete treatment.
B - Bathing and other forms of recreation.
C - Fish and wildlife propagation.
D - Agriculture, including irrigation and livestock watering, drainage, industrial cooling and process water supply.
E - Navigation and disposal of sewage, industrial waste or other wastes with the provision that such disposal will not create an offensive condition.

Tidal Salt Waters: (We have none in this segment of the river which we are presently discussing today, but you will be interested.)

SA - Shellfishing for market purposes.
SB - Bathing and other forms of recreation.
SC - Fish and wildlife propagation.
SD - Navigation, disposal of sewage and industrial wastes or other wastes with provision that such disposal will not create offensive conditions.

Where waters are designated as swamp water by the State Stream Sanitation Committee, the classifications will be followed by the term "Swp." Such waters are topographically located so as to generally have very low velocities and certain other characteristics which are different from adjacent streams draining steeper topography.

Now this discussion concerns that portion of Neuse River from the source to the Wayne-Lenoir County Line. Mr. Hubbard has gone into that and I won't repeat his remarks. We'd just like to point it out; Joe, if you will please.

Now the first discussion concerns Segment I. Neuse River and Its Tributaries from Source to Mouth of Little Lick Creek.

Public Water Supplies from Surface Sources:

City of Durham uses 9.0 M.G.D. from Lake Michie on Flat River.
Camp Butner is supplied with 1.1 M.G.D. of raw water by Durham from the above source.
Town of Hillsboro uses 225,000 G.P.D. from two impoundments on Eno River.
University Steam Station of Duke Power Company uses a small amount of water from Stony Creek.

Recreation:

There is only one stream used in this segment for bathing and this is an unnamed tributary to Flat River at Hill Forest Camp near Rougemount.

Fishing:

The following streams have been recommended by personnel of the North Carolina Wildlife Resources Commission for "C" Classification:

Little River and tributaries less Foster Creek.
Eno River from Stony Creek to Neuse River less Mill Creek, Jumping Run, and Cub Creek, which are classified "D".

Irrigation:

Very little use is made of the streams in this segment for irrigation. Suffice to note that the recommended classifications will provide protection for such a use throughout the segment.

Sources of Significant Pollution:

There are within this segment nine sources of significant pollution with an estimated P.E. of 94,063 before treatment and 20,969 after treatment which represents a reduction of pollution of 78 percent. The various sources are briefly described as follows:

Source	Type Treatment	P.E. Before Treatment	%Removed by Treatment	Receiving Stream
Cone Mills Corp., Eno Plant	None	202	0	Eno River
Belle Vue Mfg. Co.	None	1,914	0	Eno River
Town of Hillsboro	None	500	0	Eno River
Farmers Exchange Livestock Market	Secondary	142	60%	Cates Creek
Nello L. Teer, Durham Quarry	None	Inorganic Waste		Eno River
University Steam Station	None	Cooling Water		Eno River
Piedmont Packing Company	Secondary	815	45%	Foster Creek
Camp Butner	Secondary	16,890	73%	Knap of Reeds Creek
City of Durham*	Secondary	73,600	82%	Neuse River & Ellerbe Creek

*Now these figures we will give you are prior to the modernization program.

Pertinent Proposed Classifications:

Neuse River and tributaries to mouth of Little Creek, less Flat and Eno Rivers -"D".

Flat River and tributaries to dam at Lake Michie - "A-II".

Flat River and tributaries from dam at Lake Michie to junction with Eno River - "D".

Knap of Reeds Creek has a recommended classification of "D" in the report; however, a new evaluation has been made of the conditions affecting the pollution of this stream with particular emphasis on the future growth of Camp Butner. It now appears that the State Stream Sanitation Committee should give consideration to classifying this stream "E" from the point of discharge of effluent from the Camp Butner sewage and industrial waste treatment plant to its mouth. In order that the Committee may have the best possible information in regard to the best usage of this stream and its classification, you are invited to submit your views as to the feasibility of lowering the recommended classification from "D" to "E" for that segment of the stream below the Camp Butner outfall.

Eno River and tributaries to Eno Cotton Mills Dam - "A-II".

Eno River and tributaries less Stony Creek from dam at Eno Cotton Mills to dam at University Steam Station - "D".

Stony Creek - "A-II".

Eno River and tributaries less Jumping Run, Cub Creek and Foster Creek

from dam at University Steam Station to junction with Flat River - "C".

Jumping Run, Cub Creek and Foster Creek - "D".

Now Segment II. Neuse River and Its Tributaries From Mouth of Little Lick Creek to Raw Water Intake at Wake Finishing Plant near Wake Forest.

Please note that on page 280, Item II, Little Lick Creek was inadvertently referred to as Little Creek. That refers to our report, typographical error.

Public Water Supplies From Surface Sources:

Wake Finishing Plant uses 2.315 M.G.D. for industrial uses as well as drinking water for the plant and village.
Town of Creedmoor uses 0.070 M.G.D. from an impoundment on Ledge Creek.

Recreation:

There are two recreation areas located within this segment. These are as follows:

Camp Kanata located on Mud Creek.
Camp New Life located on a tributary to Honeycutt Creek.

Fishing:

The only stream recommended by personnel of the North Carolina Wildlife Resources Commission for "C" Classification is Ledge Creek from the Creedmoor water supply to its mouth, less Little Ledge Creek, which is "D".

Irrigation:

Little use is made of the streams in this segment for irrigation.

Sources of Significant Pollution:

There are within this segment seven sources of significant pollution with an estimated P.E. of 3,819 before treatment and 3,239 after treatment which represents an overall reduction of pollution of 15 percent.

The various sources are described as follows:

Source	Type Treatment	P.E. Before Treatment	%Removed by Treatment	Receiving Stream
Town of Creedmoor-Eastside	Primary	408	25%	Whitker Branch
Town of Creedmoor-Westside	Primary	24	20%	Tributary to Ledge Cr.
Erwin Mills-Plant #7	None	73	0	Neuse River
Falls of Neuse Village	Secondary	56	80%	Neuse River
Town of Youngsville	Secondary	476	90%	Hattles Branch
Royal Cotton Mills	None	83	0	Tributary to Richland Creek
Town of Wake Forest	None	2,500	0	Richland Creek to Spring Branch
General Laundry & Cleaners	None	199	0	Spring Branch

Pertinent Proposed Classifications:

Neuse River from mouth of Little Lick Creek to water intake at Wake Finishing Plant - "A-II".

Neuse River tributaries from mouth of Little Lick Creek to water intake at Wake Finishing Plant less Ledge Creek and portions of Mud Branch, and tributary to Honeycutt Creek - "D".

Ledge Creek to dam at Creedmoor water supply - "A-II".

Ledge Creek from dam at Creedmoor water supply to mouth less Little Ledge Creek - "C".

Little Ledge Creek - "D".

Mud Creek to dam at Camp Kanata - "B".

Honeycutt Creek to dam at Camp New Life - "B".

Now, Segment III. Neuse River and Its Tributaries from Raw Water Intake For Wake Finishing Plant near Wake Forest to Mouth of Beddingfield Creek near Clayton.

Public Water Supplies from Surface Sources:

The Town of Wake Forest uses 300,000 G.P.D. from an impoundment on Smith Creek. It should be noted that this creek is referred to as Austin Creek in the third paragraph on page 49 of the report and as Austin Branch in Table 2 on page 114; however, the correct name has now been established as Smith Creek.

The City of Raleigh uses 9.340 M.G.D., part of which is taken from two reservoirs on Walnut Creek, namely, Lake Johnson and Lake Raleigh.

Fishing:

There is very little fishing noted in this segment except in certain lakes located on tributaries.

Recreation:

There are two state parks and several private recreation areas within this segment. These are as follows:

Camp Durant located on a tributary to Perry Creek.
Gresham's Lake located on Perry Creek.
Lake Mirl draws water from Hodges Mill Creek.
William B. Umstead and Reedy Creek State Parks located on Crabtree Creek, Sycamore Creek and Reedy Creek.
Doak Day Camp on Hog Pen Branch.

Irrigation:

Little use is made of the main River in this segment for irrigation; however, several smaller tributaries are so used.

Sources of Significant Pollution:

There are within this segment eleven sources of significant pollution which have a total P.E. of 189,846 before treatment and discharge, a P.E. of 175,891 to the various streams after an overall reduction in pollution of but 7 percent. It should be noted that these figures reflect the conditions existing prior to the construction of the Raleigh secondary-type sewage and industrial waste treatment plant.

These sources are described as follows:

Source	Type Treatment	P.E. Before Treatment	% Removed by Treatment	Receiving Stream
Wake Finishing Plant	Lagoons	61,200	22%	Neuse River
Wake Finishing Plant Village	Secondary	551	90%	Neuse River
Nello L. Teer, Raleigh Quarry	Settlement	Inorganic Waste		Perry Creek
Town of Cary	Secondary	2,009	0	Coles Branch
Raleigh-Durham Airport	Secondary	75	80%	Little Briar Creek
Camp Polk Prison Camp	None	450	0	Tributary to Richlands Creek
Bryan Rock & Sank Co.- Crabtree Creek Plant	Settlement	Inorganic Waste		Crabtree Creek
City of Raleigh	None	115,600	0	Walnut Creek & Crabtree Creek
Carolina Pines	Primary	182	0	Tributary to Walnut Creek
Watson Seafood & Poultry Co.	None	7,830	0	Walnut Creek
Jones Sausage & Jones Abattoir	Grease Trap	1,949	10%	Tributary to Big Branch

Pertinent Proposed Classifications:

Neuse River and its tributaries from water intake at Wake Finishing Plant to mouth of Beddingfield Creek less Beaverdam Creek, Milburnie Creek and portions of Smith Creek, Perry Creek, Hodges Mill Creek, Crabtree Creek, Hog Pen Branch and Walnut Creek - "D".

Smith Creek to dam at Wake Forest Water Supply and Austin Branch - "A-II".

Smith Creek from dam at Wake Forest Water Supply to mouth - "D".*

Perry Creek to dam at Gresham's Lake - "B".

Perry Creek tributary to dam at Camp Durant "B".

Hodges Mill Creek to water supply intake for Lake Mirl - "B".

Beaverdam Creek and Milburnie Creek - "C".

Crabtree Creek and its tributaries within State Park boundries - "B".

Hog Pen Branch to dam at Doak Day Camp Lake - "B".

Walnut Creek to dam at Lake Raleigh - "A-II".

*In this connection please note that this classification was inadvertently omitted from page 282 of the report. We will pass out to you an Errata Sheet showing the added classification.

Now Segment IV. Neuse River and Its Tributaries From Mouth of Beddingfield Creek to Mouth of Little River.

Public Water Supplies From Surface Sources:

The Town of Smithfield obtains 0.700 M.G.D. water from Neuse River.
The Town of Apex uses 100,000 G.P.D. from an impoundment on Williams Creek which is tributary to Swift Creek.
The City of Raleigh obtains most of its 9.340 M.G.D. from two impoundments on Swift Creek, namely, Lake Wheeler and Lake Benson. This is supplemented by two reservoirs on Walnut Creek as mentioned previously.

It will be of interest to note that the Carolina Power & Light Company obtains 158.4 M.G.D. from Neuse River for process and cooling water for their Goldsboro or Quaker Neck Steam Plant.

Recreation:

There are two public bathing areas located within this area. They are as follows:

Holts Lake located on Black Creek.
Durham Lake located on Yellow Swamp tributary to Thoroughfare Swamp.

Fishing:

The following streams have been recommended by personnel of the North Carolina Wildlife Resources Commission for "C" Classification:

Swift Creek.
Middle Creek.
Black Creek.
Moccasin Swamp.
Raccoon Swamp.
Mill Creek.

Irrigation:

Both the main River and its tributaries in this segment are now being used extensively for irrigation. Agriculture officials indicated this usage will tend to increase.

Sources of Significant Pollution:

There are within this segment ten sources of significant pollution which have a total P.E. of 17,066 before treatment and discharge a P.E. of 16,760 to the streams after an overall reduction of but 2 percent. These sources are described as follows:

Source	Type Treatment	P.E. Before Treatment	% Removed by Treatment	Receiving Stream
Griggs Equipment Company	None	Unknown	0	Mill Creek
Town of Selma	Primary	2,134	0	Mill Creek
Town of Smithfield	None	6,340	0	Neuse River

Source	Type Treatment	P.E. Before Treatment	% Removed by Treatment	Receiving Stream
Town of Clayton	None	2,000	0	Little Creek
Pythian Home	None	50	0	Little Creek
Town of Apex	Primary	662	10%	Middle Creek
Carolina Packers	None	2,280	0	Neuse River
Town of Benson	Primary	2,800	0	Driving Branch
Town of Princeton	Primary	800	30%	Beaverdam Creek
Carolina Power & Light Co.	None	Cooling Water Only		Neuse River

Pertinent Proposed Classifications:

Neuse River from mouth of Beddingfield Creek to mouth of Little River- "A-II".

Neuse River tributaries from mouth of Beddingfield Creek to mouth of Little River less Moccasin Swamp and Raccoon Swamp and portions of Swift Creek, Black Creek, Mill Creek and Thoroughfare Swamp - "D".

Swift Creek to dam at Lake Benson - "A-II".

Swift Creek and unnamed tributaries from dam at Lake Benson to mouth - "C".

Swift Creek tributaries from dam at Lake Benson to mouth less Middle Creek - "D".

Middle Creek to backwaters of Sunset Lake - "D".

Middle Creek and unnamed tributaries from backwaters of Sunset Lake to mouth - "C".

Black Creek to Sassarixa Swamp - "C".

Black Creek from Sassarixa Swamp to dam at Holt's Lake - "B".

Black Creek from dam at Holt's Lake - "C".

Moccasin Swamp and Raccoon Swamp - "C".

Mill Creek and tributaries - "D".

HannahCreek and tributaries - "D".

Yellow Swamp to dam at Durham Lake - "B".

Segment V. Neuse River and Its Tributaries from Mouth of Little River to Wayne-Lenoir County Line, Those Portions of Contentnea Creek and Toisnot Swamp West of Wilson-Greene County Line and That Portion of Nahunta Swamp West of Wayne-Greene County Line.

Public Water Supplies from Surface Sources:

The Town of Zebulon obtains 50 percent of its water from an impoundment on Little River, the remainder being obtained from wells.

The City of Goldsboro obtains 2.400 M.G.D. from Little River.

The Goldsboro State Hospital obtains 0.500 M.G.D. from a small impoundment on Little River.

The City of Wilson obtains 2.600 M.G.D. from an impoundment on Contentnea Creek. This is supplemented by water from a small impoundment on Toisnot Swamp when necessary.

Recreation:

Within this segment there are one state park and seven privately operated recreation areas. They are as follows:

Mary Adkins Scout Camp located on a tributary to Cattail Creek.

Lake Glad is fed by water supplied from Buffalo Creek.

Gold Park Lake located on Poplar Creek.
Camp Traillee located on a tributary to Carroway Creek.
Camp Carver located on Sleepy Creek.
Camp Tuscarora located on a tributary of Sleepy Creek.
Cliffs of Neuse State Park located on Still Branch and Neuse River.
Silver Lake located on Toisnot Swamp.

Fishing:

The following streams have been recommended by personnel of the North Carolina Wildlife Resources Commission to be classified "C".

Neuse River.
Contentnea Creek from Wilson Water Supply to mouth.
Black Creek from mouth of Great Swamp to mouth.
Little Contentnea Creek to mouth.

Irrigation:

The tributaries are being used quite extensively for irrigation while the use of the main River is growing.

Now just briefly I'll speak about Swamp Water Designation as a reminder. The following streams have been designated as "swamp waters":

Contentnea Creek and its tributaries from the dam at Wilson Water Supply to its mouth.
Toisnot Swamp and its tributaries from Atlantic Coast Line Railroad trestle to its mouth.

This means that all streams classified other than "E" may have a minimum dissolved oxygen content of 3.0 ppm and a pH as low as 4.3.

Sources of Significant Pollution:

There are within this portion of Segment V, fifteen sources of significant pollution. They have a total P.E. of 73,967 before treatment and a P.E. of 54,232 after treatment. This is an overall reduction in pollution of 27 percent. This poor showing is in part due to poor operation of existing treatment facilities.

These sources of pollution are as follows:

Source	Type Treatment	P.E. Before Treatment	% Removed by Treatment	Receiving Stream
Town of Wendell	Primary	1,763	10%	Buffalo Creek
Town of Kenly	Secondary	2,033	35%	Mill Creek
Goldsboro State Hospital	None	6,296	0	Neuse River
N. C. Consolidated Hide Co.	Grease Trap	4,020	-	Little River
City of Goldsboro	None	27,441	0	Neuse River & Stony Creek
Town of Zebulon	None	2,000	0	Little Creek
Free Will Baptist Orphanage	Secondary	80	85%	Tributary to Turkey Creek
Town of Middlesex	Primary	400	30%	Cattail Branch

Source	Type Treatment	P.E. Before Treatment	% Removed by Treatment	Receiving Stream
Town of Bailey	Primary	544	35%	Bailey Branch
City of Wilson*	Secondary	26,400	68%	Hominy Swamp
Town of Lucama-West	Primary	175	25%	Tributary to Black Creek
Town of Lucama-East	Primary	175	10%	Tributary to Black Creek
Town of Stantonsburg	Primary	840	20%	Contentnea Creek
Town of Fremont	Secondary	1,200	10%	Aycock Swamp
Town of Pikeville	Primary	600	20%	The Slough

*It should be noted that the City of Wilson has constructed a new sewage and industrial waste treatment plant since the stream studies were conducted, and these figures I gave you are prior to this new construction.

Pertinent Proposed Classifications:

Neuse River, less tributaries, from mouth of Little River to Wayne-Lenoir County Line - "C".

Poplar Creek to Gold Park Lake, Carraway Creek tributary to Camp Traillee Lake, Sleepy Creek to Camp Carver Lake, Sleepy Creek tributary to Camp Tuscarora Lake and Still Branch - all "B".

Toisnot Swamp to Atlantic Coast Line Railroad trestle, Contentnea Creek from Turkey Creek to Wiggins Mill Pond dam and Little River less tributaries - "A-II".

Contentnea Creek from Wiggins Mill Pond dam to Wayne-Greene County Line, Black Creek from Great Swamp to mouth, and Little Contentnea Creek to Wayne-Greene County Line - "C-Swp."

Now just a word about the classification of streams used for irrigation. You who have studied the report, especially Map 3, have been impressed, I know, with the large number of streams being used for irrigation, particularly below Raleigh. For the sake of brevity, I have not attempted to list separately the numerous streams so used. Suffice to say that all streams have a recommended classification high enough to protect such a usage of the waters, except Whitker Creek near Creedmoor which has a recommended classification of "E".

Now this, Senator Whitfield, completes our presentation.

Chairman Whitfield: Thank you, Mr. Clary. Now you can see the amount of work that's required - amount of research and amount of time preparing a report of this kind. As I pointed out before, it's not spectacular work, it's plodding work. And to the average person perhaps it is not interesting to sit and listen to it, but it is so vital; and if it isn't done, there won't be a civilization to sit and listen. That's why we have to go through this to show you the intricate problems involved in classifying the streams in North Carolina. We are happy to have had you here today, and now I'll ask Mr. Hubbard to please call on those who expressed their desire to make some remarks. Mr. Hubbard.

Mr. Hubbard: Mr. Chairman, ladies and gentlemen, now that we have reached the third part of the hearing, that of receiving your comments and recommendations, I think before I recognize those who have indicated they would like to speak, I would like to summarize again some of the picture on the River Basin. I believe that Mr. Clary in referring to the map did not indicate the distinction between the various colors on the map. The light blue indicates those streams that have been recommended for classification as sources of public water supply; the orange indicates Class "B" and is applied and shown on the streams that are used for recreational purposes; while Class "C", the light green in this Christmas tree appearance, are the streams that are used or recommended for classification for protection for fish and wildlife; Class "D", the red, is the recommended agricultural classification which indicates that the waters will be protected suitable for irrigation purposes,and incidentally in the scheme of classifications, any classification higher than that indicated is suitable for the lower classification. Class "E", normally shown in black color (which I don't believe we have shown on this map), designates water suitable only for navigation, or intended primarily for use in the discharge of municipal and industrial waste. The swamp water designation, shown by the purple color, indicates those streams which are draining swampy areas and, therefore, are designated as swamp water, which require a little lower content of dissolved oxygen to meet the standards; in fact, one part per million lower than would be required on non-swamp waters. So that will help you to better visualize the classifications from the appearance of the map.

I would also like to resummarize the situation in the Neuse River Basin and to give you some indication of water usage within the Basin. There are at present fifty-two municipal water supplies within the Neuse River Basin. Twelve of those are obtained from surface sources, such as the water supply here at Goldsboro or at Durham or Raleigh. They serve the greatest number of people, 245,000 with 26½ million gallons of water per day, from the twelve sources of surface water supply. The forty communities that use well water supplies serve a total of 121,000 people, approximately half the number served by surface water supplies, with 12 million gallons of water per day.

Industries in the area use 2.6 million gallons of surface water and 3.8 million gallons of ground water, so that the total water supply presently being used in the Neuse River Basin amounts to 45 million gallons of water per day, or 110 gallons per capita per day for those served by these water supplies. As Mr. Clary told you, we have 88 sources of significant pollution, of which about 40 percent of the pollution is coming from industrial waste, the other 60 percent being contributed through and from municipal systems. Treatment is provided to the extent of only removing approximately one-quarter of the pollution - that is a rather low degree of treatment in terms of the overall. I believe that Mr. Clary mentioned that in the upper section or one section that the treatment was effective enough to remove some 75 percent of the total pollution, which indicates that the upper section is far ahead in terms of providing adequate sewage treatment, than is the lower section of the Basin. Obviously from those figures, it doesn't take a lot of figuring or calculation on anybody's part to realize that we have failed to do the job in terms of waste treatment that will be required now and in the future to protect the important waters of the Basin, and to provide for our future needs. With that, Mr. Chairman, I'm pleased to introduce those people present who have indicated that they would like to offer some comments.

The first person to be recognized is Mr. Wade G. Brown of Durham. He is Assistant Superintendent of the Water and Sewer Department, and he's indicated that he'd probably like to make a statement to the Committee. Mr. Brown, we'd be glad to recognize you for any comments you wish to make now.

Mr. Wade G. Brown, Assistant Superintendent, Water and Sewer Department, City Hall, Durham, North Carolina: Thank you very much. I simply want to say that it is a pleasure to be here and I'll leave any remarks to Mr. Jones. I'd like to commend the group on the work it has done, and Mr. Jones will bear out for me or bear witness that the City of Durham is not only all for you, but way ahead of you.

Mr. Hubbard: I apologize to you for having overlooked calling your attention to the fact that these proceedings are required to be recorded verbatim; therefore, I must ask that you cooperate with us by coming to the microphone for any comments that you may wish to make. We certainly want to get your comments and your recommendations into the record, and the only way we have of doing that is for you to come and talk into the microphone. Mr. Claude V. Jones, City Attorney for the City of Durham, is present and we would be glad to have any comments you would like to make, Mr. Jones.

Mr. Claude V. Jones, City Attorney, Durham, North Carolina: As they say in baseball, it's a long run for such a short slide. All I wanted to say was to furnish some information I believe Mr. Clary asked for, that is the figures as to what the City of Durham has spent recently by way of additions to its sewage plants.

We have three sewage plants. We've been in this business since 1902. At the Northside Plant, which is the plant which drains into this Basin, Neuse River Basin, the City of Durham between 1954 and 1956 made additions to an existing plant which cost $1,910,000; that is, the additions cost that. A couple of other plants also were improved, which you are not interested in here, but they bear on the overall problem: the New Hope Plant where the City of Durham made additions in 1954 at a cost of $450,000, and the Third Fork Plant where the City of Durham made additions that were completed in February, 1958, at a cost of $1,450,000. So we have spent on sewage treatment in the City of Durham since 1954, $3,810,000, to plants that were already in existence prior to that time. Now, Mr. Hubbard said the upper parts of this Basin seemed to be removing a little more of the pollution than the lower areas are now doing, and I believe Mr. Hubbard said some go as high as 75 percent. The City of Durham is much higher than 75 percent, I believe, considerably higher, and I really did not indicate on the card here that we would want to have anything to say, but in view of your inquiry about the dollars, I thought we would put that in the records. Thank you very much.

Mr. Hubbard: Thank you, Mr. Jones. I would like to say this on behalf of the City of Durham, and I think we can make the same comment on behalf of certain others present; the City of Durham has during the past several years spent a great deal of money and has made great strides toward taking care of their problems and responsibilities to not only the Neuse River Basin waters, but to the Cape Fear River Basin waters, and Mr. Jones, I am pleased to have had you bring out specifically what the City has done.

The next person, Mr. Chairman, whom we would like to recognize is Mr. Gilbert E. Powell, Attorney for Burlington Industries of Greensboro, North Carolina, who I believe may make some comments of his own and will introduce other people from his industry. Mr. Powell, we'd be glad to hear from you, sir.

Mr. Gilbert E. Powell, Legal Department, Burlington Industries, Inc., 301 North Eugene Street, Greensboro, North Carolina: Mr. Chairman, Members of the Committee, ladies and gentlemen. As a member of the Legal Department, I appear before you today on behalf of Burlington Industries. As you know, Burlington Industries owns and operates the Wake Finishing Plant, located between Raleigh and Wake Forest. It is engaged in dyeing and finishing synthetic goods; uses the water of Neuse River in its operations; and is vitally concerned about the classification which you will assign to this River.

Our Company is also interested in the splendid work and efforts of this Committee in improving the condition of the streams of North Carolina. We commend you for your zeal in this great undertaking and for your sympathetic hearing and understanding of the problems confronting those who are most directly affected by the decisions you will make.

As a good citizen of the community, our Company wants to cooperate and help in this worthy endeavor, but within realistic limits which would justify our continuation in the important business in which our Wake Finishing Plant is engaged. As evidence of our keen interest and concern in this regard, not only have we had our own engineering department working on the problem, but Burlington Industries has employed O'Brien & Gere, Consulting Engineers of Syracuse, New York, who are specialists in industrial waste treatment, to make a special study of the condition of the waters of the Neuse, including stream survey, sampling and analysis, make recommendations as to how best to treat our industrial waste at Wake Finishing Plant, and to estimate the cost of such undertaking.

As a result of these studies it appears that it will cost Burlington Industries thousands of dollars to install and operate the necessary equipment and processes to comply with the requirements of even an "E" classification for the Neuse at this point. Frankly, we had hoped that an "E" classification would be proposed by the Committee. Even this, I understand, would greatly improve the conditions now existing; and, although, it would cost Burlington Industries a considerable sum of money, our Company would gladly expend it for that purpose as its reasonable share in such improvements.

To meet the requirements of a "D" classification, I understand, would necessitate an expenditure by our Company of many more thousands of dollars. If such a classification is assigned, of course our Company will do its best to comply and will comply, but it would be at a greater expense, and have a serious effect upon the earning capacity of our finishing operation.

I have with me today Mr. Sam Hasell of our Engineering Department, who is deeply interested in the matters under discussion, and I also have with me Mr. Samuel W. Williams, Jr., of the firm of O'Brien & Gere, who conducted the studies to which I have referred. I would like to present to you at this time, Mr. Williams, who will make a brief report on his findings in connection with the investigation and studies he has made. Thank you.

Mr. Samuel W. Williams, Jr., Consultant, O'Brien & Gere, Consulting Engineers, 400 East Senessee Street, Syracuse 2, New York: Mr. Chairman, Members of the Committee, ladies and gentlemen. We were retained by Burlington Industries early this year to investigate the treatment requirements at the Wake Finishing Plant and to determine cost of treatment to meet several possible classifications of the River. The reach of the River, which we investigated, was from the water intake immediately upstream of their waste disposal outfall to Beddingfield Creek, which is east of Clayton. The plant at Wake employs about 450 people and is engaged in dyeing and finishing fabrics woven largely of synthetic materials such as dacron, orlon, rayon, acrylon, and several others. As has been pointed out earlier the wastes from the plant are discharged to two parallel lagoons which have a holding time of about twenty-four hours before the wastes are finally discharged to the Neuse River. About twenty percent of reduction in B.O.D. is achieved in these lagoons, which is not a great degree of removal. But their principal benefit is in equalizing the waste flow and characteristics. It has also been pointed out the waste flow is about 2.1 M.G.D. Our investigation included a review of all previous reports, two of which were prepared under the auspices of your Committee, collection of analyses of lagoon and stream samples for a period of one week in February of this year and for three days in June, conferences with Dr. Nelson Nemerow who did the analyses and offered advice on treatment methods, determination of basis of design of required treatment plants, and the determination of project cost and operating cost. We sampled the River at your points Nos. 59, 60, 66 and 67, 59 being above the waste outfall and 60, 66 and 67 below. We also sampled during the June sampling at point 86 which is just above Beddingfield Creek. Our current sampling and analyses confirm many of the earlier findings, although there had been many changes in the manufacturing processes used and in the lagoon operation since your sampling was done in 1954. For instance, when you did your sampling, the lagoon was held during the day and discharged at night. It is now operated on a twenty-four hour basis. Our analyses indicated a waste high in phenols, formaldehydes, chlorides, and 5-day B.O.D., and a low in pH and suspended solids. Unfortunately, the River stage was high during the first sampling period, and even though it was somewhat lower in the second period, we couldn't get much to determine the dissolved oxygen concentration during periods of low flow. However, your sampling, done during 1954, was during a relatively low flow period, and at that time there was a definite decrease in dissolved oxygen concentration below the Wake Finishing outfall. It appears from the study and calculations that have been made, that the present degree of treatment at Wake Finishing is not sufficient to meet either a "D" or an "E" classification.

Based upon the flow data available from the U. S. G. S. Gaging Stations, the Raleigh office has estimated the minimum weekly flow for a ten-year period to be 31 cubic feet per second at the Wake Plant. With the dissolved oxygen and the 5-day B.O.D. existing in the River immediately upstream from the point of discharge of the wastes, it will be necessary to remove approximately 80 percent of the 5-day B.O.D. in the wastes in order to meet a Class "D" classification and 71 percent to meet an "E" classification.

It appears that any of the known treatment methods that will affect this degree of removal should also reduce the amounts of color, formaldehyde, and phenol to a degree that they can be dispersed in the River and meet the requirements of the "D" Class waters. In addition, starch, which apparently provides the nutrient for the rapid growth of coliform bacteria should be

oxidized during the treatment process, thereby minimizing the nutrient available for bacterial growth. For purposes for this study, a two stage high-rate trickling filter plant has been selected as the most effective means of treatment for the wastes and a basis of design, and cost estimates have been prepared for this method. As an aside to this, if a trickling filter plant were put in, it will be our recommendation for sanitary sewage from the plant and the plant village be diverted into the industrial waste treatment plant. Units in the treatment plant would include the present lagoons; a primary roughening filter; two intermediate settling tanks; one or two secondary filters, depending upon the design; two final settling tanks; sludge dewatering and incineration facilities, because we are not sure that these solids would digest very well; and miscellaneous equipment. The project cost of a plant to meet a "D" classification is estimated to be about $900,000. Annual operating costs are estimated to be about $35,000, which, added to amortization of the project cost, results in the total annual cost of about $89,000. Summarized, the plant required would be a two-stage trickling filter plant or an equivalent plant which would cost Burlington about $900,000 to construct, $35,000 to operate, and result in a total annual cost that would be $90,000. Thank you.

Mr. Hubbard: Thank you, Mr. Williams. Is there anyone else from your group that would like to make any further comments? Well, thank you very much.

Mr. Chairman, we have with us our own City Manager from the Capitol City whom I'd like to recommend or recognize at this time; I don't know whether I can recommend him or not; we've got to wait to see what he's going to say. But I'd like to recognize Mr. W. H. Carper, City Manager, City of Raleigh, North Carolina. Mr. Carper.

Mr. W. H. Carper, City Manager, City Hall, Raleigh, North Carolina: Thank you, Mr. Hubbard, Senator Whitfield, lady and gentlemen of the Stream Sanitation Committee. The City of Raleigh wishes to express its support of the fine work this Committee has been doing with regard to the conservation and development of our State water resources.

The increasing population and expanding economy of North Carolina necessitates a rational approach to the problem of classification of the streams and rivers for their best usage. The Division of Water Pollution Control of the North Carolina State Board of Health has made certain recommended stream classifications in their 1959 Pollution Survey Report of the Neuse River Basin in which the City of Raleigh is vitally interested as it affects its future growth and development.

Part A. The classification of the Neuse River as "A-II" for drinking water purposes from the mouth of the Little Lick Creek to the raw water intake of the Wake Finishing Plant concurs with the recognized need for obtaining a raw water supply in the vicinity of the Falls of the Neuse to serve the City of Raleigh. Such need would require storage on Neuse River.

Our preliminary investigations indicate that the headwaters of the storage would approach the confluence of the Little Lick Creek and Neuse River. The presently recommended classification of Neuse River above Little Lick Creek by the Division of Water Pollution Control is "D" for agricultural use. We believe that the extention of the "D" classification any further downstream would seriously jeopardize the development of our proposed raw water facilities. We, therefore, concur wholeheartedly with the recommended

classification of this portion of the River.

Part B. The City of Raleigh began limited operations of the Walnut Creek Sewage Treatment Plant in November of 1956. The plant was in full operation in July of 1957. The full operation of this plant marked the completion of a three and a half million dollar project by the City of Raleigh to modernize its sewage system and provide complete treatment for its wastes. In addition to the regular treatment we chlorinate our outfalls and the effluent from our treatment plant during summer months in an effort to further reduce the bacteria count. The plant design was based on flows and pollution loads of the Neuse River obtained from the State Board of Health. The effluent from the treatment plant actually discharges into Walnut Creek about three and two-tenths miles above its confluence with Neuse River. The flow in Walnut Creek is normally sufficient to provide adequate dilution and velocity to get the treated waste to the Neuse River before an appreciable oxygen reduction has occurred. However, during excessive dry summers, the flow in the Creek is practically zero. In such cases the only flow in the three and two-tenths miles reach of the stream below the outfall would be the treated waste water from our sewage plant.

The Division of Water Pollution Control has recommended that Walnut Creek be classified "D" for agricultural use from the dam at Lake Raleigh to the confluence of Walnut Creek with Neuse River. The disposal plant design, operation and location were developed with the support, collaboration, and approval of the State Board of Health and the Stream Sanitation Committee representatives respectively.

Even though this plant is modern in design and operation, we do not believe it possible to produce an effluent in periods of extreme low flow or no stream flow in this three and two-tenths miles stretch that would comply 100 percent with a "D" classification 100 percent of the time.

Three of the four quality standards for Class "D" can be met under all conditions and the fourth point, the three parts per million dissolved oxygen can be maintained in the stream about 95 percent of the time. However, when the stream flow is at its minimum, about 5 percent of the time, we cannot, we believe, meet the three parts per million minimum standards as required in the "D" classification.

The two or three minor points of pollution source mentioned in the report in the immediate Walnut Creek area will in all probability be cared for by the City Sewage System in the next few years; they are the poultry plant and the Carolina Pines area.

It is therefore our belief that Class "E" for this portion of Walnut Creek would adequately satisfy the actual use of this portion of the stream system, and we respectfully ask that that be considered for the reasons mentioned. Thank you very much.

Mr. Hubbard: Thank you, Mr. Carper. We also have with us from the City of Raleigh, Mr. Troy Doby, who is Superintendent of Plants, and he has indicated he would like to make some comments. Mr. Doby.

Mr. Troy Doby, Superintendent of Plants, Department of Public Utilities, Raleigh, North Carolina: Senator Whitfield, ladies and gentlemen of the Stream Sanitation Committee. I'd like to make a statement as to operation of the Walnut Creek Plant.

We were issued a Certificate of Approval specifying certain standards which we had to meet. I want it to go on the record as saying that the plant as designed and constructed is meeting those standards as specified. Thank you.

Mr. Hubbard: Thank you, Mr. Doby. We have with us also the Director of Public Utilities. He has not asked to be heard, but I would like to introduce him. Stand up, Mr. Johnson, and be recognized.

Chairman Whitfield: We'd be glad to hear from you, if you care to say anything.

Mr. E. M. Johnson, Director of Public Utilities, City of Raleigh, North Carolina: No, it has all been said.

Mr. Hubbard: We have with us Mr. Louis Schmitt, who is Manager of the N. C. Consolidated Hide Company here in Goldsboro. Mr. Schmitt, would you like to make a comment?

Mr. Louis Schmitt, Manager, N. C. Consolidated Hide Company, Inc., Goldsboro, North Carolina: As an industry, we fully realize our problem and responsibility and in the future, and as we have done in the past, we hope to cooperate with Mr. Hubbard's Department. We need some help from the City of Goldsboro to straighten out our problem.

Mr. Hubbard: Thank you, Mr. Schmitt. Mr. Chairman, that's all that have indicated they would like to be heard; but before closing this session of the proceedings, I would like to again offer, for any of those who are present that did not indicate they would like to be heard, an opportunity of doing so at this time. Is there anyone else that would like to offer advice to the Committee, or ask a question, or make a comment concerning the matter before us? Mr. Brown?

Mr. Brown: I have some information about the future development of the River, you might be interested in. This is offered merely as public information about certain possibilities of future development of the Neuse concerning the dam proposed by the Corps of Engineers at the Falls of the Neuse. The possibility of this dam has been under consideration as we all know for a great many years, and I have some information that is personal communication which is, therefore, not a matter of public record, which might be of incidental interest.

When the Corps was authorized by Congress to review the proposed dam at this site, Falls of Neuse, several years ago, as usual, several dams were considered. The maximum pool which they commenced considering was of such elevation, that is the dam was of such elevation, as would have backed water up into the Flat River and the Eno River and would have flooded out our turbines at Lake Michie. Therefore, of course, we had a personal interest in that particular pool, as we didn't wish to see our water supply jeopardized.

I made a trip to Wilmington and talked to Colonel Rowland and his staff, and they agreed to reduce the maximum pool for consideration, such as the flooding of the Eno and Flat Rivers; in effect there would be little or no flooding in those upper reaches. The maximum pool would actually have backed water up Ellerbe Creek as far as Club Boulevard in Durham when full, and, of course, you can imagine that the City was a little bit concerned about that possibility.

A number of hearings were held which are a matter of public record. Of course, we were interested as to the possibility or probability of the construction of any such dam; and while neither Colonel Rowland nor any of his staff could state anything very definite, they did venture the opinion that if everything went absolutely according to plan and if everything was approved and gone through with in the shortest possible time, it would be a minimum of ten years before any such dam could be erected. And in the planning of the City of Durham that meant a great deal to us, as to the necessity of dredging out Ellerbe Creek, evaluating the kind of treatment we had at present, and the developing of future water supplies. It's been mentioned that Raleigh will look to the Neuse River; so does Durham, and consequently, we are quite seriously concerned with any potential development.

Now since several of these facts that I present to you are not a matter of any record, I thought it might be of interest to you at least to get the Corps of Engineers' viewpoint.

Chairman Whitfield: Thank you, Mr. Brown. I guess when you heard about that ten years you said "dam", yourself, didn't you?

Mr. Hubbard, you might state what the next move is now, for industry and municipality.

Mr. Hubbard: Of course, the next part of this proceeding will be the compilation of the Hearing Report, which will be mailed to all people on the mailing list and to others who may request it, and to all persons who have participated in the proceedings this morning, as well as to all polluters or water users that are listed in our report in the Neuse River Basin.

Following that step, the Committee will study the Hearing Report together with the technical report, taking into consideration the observations offered the Committee this morning along with the technical findings as reported in the survey report, and will come to an official decision with reference to the classifications that should be assigned to the various waters in the Basin.

The Committee will then, of course, officially act by assigning these classifications which establishe at that time a level of water quality that must be maintained in the Neuse River Basin to serve the purposes indicated.

The next step will be the development of a Comprehensive Pollution Abatement Plan which lists each source of pollution and includes a statement, a general statement, indicating the pollution abatement action and various steps that should be taken by the owners of such sources of pollution toward correcting any problem that they may have in relation to the stream classifications. That, of course, will be mailed to all persons concerned and all persons who are listed on the mailing list. Each polluter will be given an opportunity to propose, and if accepted, establish a voluntary program of approach to the satisfying of its pollution abatement needs.

Normally, where proposals are submitted to the Committee that are acceptable, that are reasonable, and that will provide the degree of necessary treatment, the Committee approves such proposals and issues what we term a Temporary Permit; actually it's a continuation permit, permitting the industry or municipality involved to continue discharging its waste for a reasonable length of time during which they are expected to carry out the necessary/corrective

measures. Once those corrective measures are completed and approved by the Committee, then a Permit for a definite period of years or a Certificate of Approval, whichever the case may be, is issued; and so long as the industry or municipality, and this was mentioned by Mr. Doby, conforms to the terms and conditions of such approval, that industry or municipality would not be expected under the Statute to take any further measures for the duration of the Permit. As I said earlier, there are two approaches to the matter: one voluntary, the other required. So far, we've been fortunate in that all have made satisfactory progress under the voluntary approach, and we have not had to issue any special orders requiring pollution abatement. I hope that that procedure will continue to be followed and that we can work the matter out cooperatively. Mr. Chairman, that completes what I have to say.

Chairman Whitfield: Thank you, Mr. Hubbard. Now we'd like to give the Committee Members a chance to make any comments that they wish to make. That's our usual procedure. They've been sitting here listening, and, of course, they have ideas that they may want to express at this time, or if not, then later. We would be delighted to hear first from our Vice-Chairman, Mrs. Bishopric, if she has anything she'd care to say.

Mrs.Karl Bishopric, Vice-Chairman, State Stream Sanitation Committee, Spray, North Carolina: Thank you very much, Senator Whitfield. It's a pleasure to be here, and it has been most interesting to listen to these discussions. Those of us who live so far away from water, simply can't realize that there can be so much water so close, and yet they have needs for more. It's an interesting experience to be here, and I expect it to be even more so as we go down to the end of the Basin tomorrow.

Chairman Whitfield: Mr. Mayor.

Mayor Berkeley: I'm going to make news. No comment.

Chairman Whitfield: That is news, isn't it?

Mrs. Bishopric: Well, you are home. They know you.

Chairman Whitfield: Mr. Upchurch. Mr. Upchurch, as you know I'm quite sure, is from Raeford, from the big agriculture area of our State. We'd like to hear from you, Mr. Upchurch.

Mr. T. B. Upchurch, Member, State Stream Sanitation Committee, Raeford, North Carolina: Chairman Whitfield, I don't have a great deal to say. I'm always impressed by the wide variation in the problems of sanitation of the streams of our State. In the western part of the State we have the wide turbulence or the great turbulence of the rivers, because of the rapid decline of the stream bed as the water flows over it. For instance, the Pigeon River has a fall of more than twenty-five feet a mile; why it falls as far in ten miles as the Neuse River falls in its entire length. That is important, because you get a rapid build-up of oxygen in the stream and you are able to take care of greater loads of pollution. The slow moving streams do represent a problem, because they do not move out the pollution which tends to stay in one locality. These problems vary as I say all over the State, but they have means or seem to have means through nature of levelling these problems out. In the west the streams are shallow, their beds have actually been filled up by silt and waste from the mines; whereas, down here the streams

tend to keep their usual depth. These problems can be met and can be solved, and we thank you people for your fine cooperation that we know we're going to get in the future. Thank you.

Chairman Whitfield: Thank you, Mr. Upchurch. I'm glad you mentioned about the difference in the topography of the west and the east. For example, if the Neuse River had the pollution that the Pigeon River or the French Broad had, you couldn't live in Goldsboro. Mr. Johnson, we'd be glad to hear from you.

Mr. P. Greer Johnson, Member, State Stream Sanitation Committee, Asheville, North Carolina: I'm glad to see these people here, and I was particularly interested in the financial figures we got from Durham. As the Senator said, my home town in the French Broad River Basin is bad. We've got a seven million dollar problem up there, and we are going to handle it; but compared to what you people are talking about down here, we're bad folks up there. But we are going to handle it, and we are going to handle it in the next couple years.

Chairman Whitfield: Thank you, Mr. Johnson. Colonel Snow.

Mr. B. C. Snow, Member, State Stream Sanitation Committee, Raleigh, North Carolina: I don't think I have anything to say, Mr. Chairman.

Chairman Whitfield: You know you can be with a man a long time, and think you know him and then all of a sudden you discover one day you don't know him. Now we have a member of this Committee from the mountains, and he's a good speaker, but we didn't know he was a gigantic orator until down in Wilmington last September. Mr. Farthing.

Mr. H. Grady Farthing, Member, State Stream Sanitation Committee, Boone, North Carolina: Mr. Chairman, Members of the Committee, and gentlemen. I'm sure that I speak the sentiment of every Member of this Committee when I say that we are greatly indebted to Mayor Berkeley and Mrs. Berkeley for a very pleasant evening of yesterday. His beautiful home nestled back in the tall pines paints a picture that will be hard to forget, and we thank you very much, Mayor Berkeley.

For many years it has been my privilege to travel over the state of North Carolina. There are 100 counties each containing its natural resources. Some are rich in minerals, some in agricultural products and some are in resort areas, but from the mountains to the sea, each section has its God-given riches and natural beauties. It would be most difficult to pinpoint the most desirable place in which to live. Conditions are so varied that it is possible for the most discriminating person to find something to their liking. I have never seen a section of North Carolina that I did not like.

Take your section here for instance; I like your long straight roads, your broad fertile fields and your bountiful crops. Yes, I like your sea-shores and your hot sands. I like to stand on your beaches and watch the white caps race for the shores, and I like to watch the sea gulls ride the warm southern breezes. The fragrance of your pine forests is comparable to that of the balsam and the hemlock of the mountains. The blossom of your azalea is comparable to that of the flaming rhododendron, which has the mountains all aglow at this time. My home is in the northwestern section of North Carolina, up there where the balsam and the hemlock grow, where the

tracks of the turkey and the deer are found mingled in the snow. The mountains are tall and majestic. The valleys are broad and fertile, each endowed with many of nature's most precious gifts.

Each mountain, hill and valley has fountains of pure fresh water bubbling from the bowels of the earth. Yes, it is as pure as the morning dew as it starts on its course across the state to serve the needs of mankind, and to quench the thirst of every living thing.

Water is more precious than all the gold and silver. Yet it is the most used and the most abused of all of God's gifts to our fair land. The purpose of our Committee, ladies and gentlemen, the State Stream Sanitation Committee, is to preserve the purity of this water from the mountains to the sea, thereby preserving decent living conditions for those who are to follow in our footsteps.

I saw a picture not long ago which impressed me very much. This young man was walking down the road of life. He was staring sternly into the misty future. By his side was a small curly-headed girl reaching up grasping one finger of his hand. She said, "Daddy, how far are we going?" Daddy could not tell her how far he was going with her. But he knew that he was going to provide for her as best he could, before he must leave her to fight the battle of life alone.

That is the position of our Committee, ladies and gentlemen. We cannot go all of the way with the youth of the land in this "pure water drive." But we must pave the way so that the ready-born and the unborn who are to follow in our footsteps may have plenty of pure clean water and the same fine way of life that we have been privileged to have.

Chairman Whitfield: He's not only a gigantic orator but his wisdom is worth quoting. And we have another man on our Committee who on occasions delivers some pearls of wisdom, too. Mr. Vann, we'd be glad to hear from you.

Mr. J. N. Vann, Member State Stream Sanitation Committee, Ahoskie, North Carolina: Mr. Chairman, I have no comments.

Chairman Whitfield: You are not scared after that other one,are you?

Ladies and gentlemen, it has been a pleasure to be here with you; and we have heard what you have had to say, and you heard what we had to say. Of course, these classifications are tentative, just what we've suggested. We will study all that's been said by you. That's when we get around the conference table,and we can reach an agreement I'm quite sure, because we all have North Carolina's welfare at heart. We've had vision enough today to know what pure water means, to know if we let it become polluted, what will happen to us. We've waited almost too long. It took us a while to understand; it was quite an educational campaign; but finally we did wake up to the fact that if we were going to be an industrial State, even an agricultural State, we had to protect our water supply. We Americans particularly in our earlier days, were quite wasteful with our timber and our other natural resources, and we still are in many instances; just seem to think that freedom and liberty give us the license to do as we please without thinking of future generations. Now we understand what it means. Listen, realize, as I explain what I mean about working together to solve these problems. I've

always maintained that men of good will could sit around the conference table and solve any problem that should be solved. And as I've said, we're not a punitive Committee; we are your friends. We have the responsibility, and it is our responsibility, to show you that when we've made a final decision, we made that decision, not only for North Carolina, but for you, too; because we were not created to destroy industry, we were not created to destroy municipality, we were created to protect you and sometimes protect you from yourselves. And that's what we want to do, help you. So now let's get down to business and get serious about this matter in solving this problem. In our youth we were warned about destroying our natural resources - having a big time. It reminds me about that little quatrain:

King Solomon and King David led merry, merry lives,
With their many, many pleasures and their many, many wives.
When old age overtook them with its many, many prongs,
King Solomon wrote the Proverbs, King David wrote the Psalms.

The meeting is adjourned.

(Meeting adjourned at 1:10 p.m.)

The following brief and letter were received by the Secretary concerning the public hearing held at Goldsboro, North Carolina:

CITY OF DURHAM

NORTH CAROLINA

Water and Sewer
Department

NORTH CAROLINA
DURHAM COUNTY

BEFORE THE STATE STREAM SANITATION COMMITTEE

PROPOSED CLASSIFICATION OF ELLERBEE CREEK AND NEUSE RIVER REFERRING TO THE "POLLUTION SURVEY REPORT, NO. 7, THE NEUSE RIVER BASIN, 1954-58"

MEMORANDUM BRIEF OF THE CITY OF DURHAM

The Neuse River Basin Pollution Survey Report, No. 7, 1954-58, states, Page 48, "In August 1956, under provisions under Certificate of Approval issued by this office, the plant went into full operation after an extensive improvement and enlargement program. This treatment plant, as improved, is one of the most modern activated sludge plants in North Carolina. It should be emphasized that during the modernization program every effort was made to operate the old units as efficiently as possible." As correctly set forth in the Report, the City of Durham, North Carolina has spent approximately $1,910,000 on additions to its Northside Treatment Plant. This Plant provides three-stage treatment and has consistently provided an exceptionally high degree of treatment since the completion of additions. B.O.D. reductions have consistently been 95% and better. It is thus apparent that the City of

Durham has not only expended a very large sum of money in addition to its original investment, but that the Northside Plant is being operated at an almost unheard of high degree of treatment efficiency.

The U. S. Army Corps of Engineers have made preliminary surveys and reports concerning the possibility of using Federal funds for dredging and channel improvements in Ellerbee Creek and this Project has now been approved. The Corps is now completing final plans and specifications preparatory to the letting of an actual contract while the City, with the assistance of the County, is engaged in completing the necessary rights of way to permit access for the work contemplated. We understand that Neuse River to the mouth of Little Lick Creek, Ellerbee Creek and Goose Creek are proposed to be given a "D" classification. The City does not propose to oppose this classification; however, we respectfully submit that these streams should not be classified higher than "D", and we respectfully request that the committee do not place any classification higher than "D".

Respectfully submitted this the 22nd day of July, 1959.

CITY OF DURHAM

BY /s/ R. W. Flack
CITY MANAGER

hvl

DUKE POWER COMPANY
ENGINEERING DEPARTMENT
CHARLOTTE 1, N. C.

Charles T. Wanzer
Vice President
and Chief Engineer

July 31, 1959

Mr E C Hubbard, Secretary
State Stream Sanitation Committee
N C State Board of Health
Raleigh, North Carolina

Subject: Neuse River Basin
Domestic Water Use
Eno Steam Plant

Dear Mr Hubbard:

As our Mr W S Lee discussed with you and Mr W R Clary yesterday, Duke Power's Eno Steam Plant is no longer in service and the generating equipment is being removed. However, the transformer substation at Eno remains in service and the company-owned village is occupied by substation operators. Domestic drinking water for this village is obtained from Stony Creek. There are no wells or other alternative sources of drinking water supply. We plan no changes in the domestic water source in the foreseeable future, and accordingly we concur in the A-II classification for Stony Creek as tabulated on page 279 of your "Neuse River Basin Pollution Survey Report 1959".

Thank you for this opportunity to clarify the Company's plans for continued use of this domestic water supply.

Yours very truly,

/s/ C. T. Wanzer

WSL-i

C T Wanzer

STATE OF NORTH CAROLINA

STATE STREAM SANITATION COMMITTEE

STATE BOARD OF HEALTH

RALEIGH, NORTH CAROLINA

L E G A L N O T I C E

Notice is hereby given, pursuant to Section 143-215, General Statutes of North Carolina, that public hearing concerning pollution of the waters of the Neuse River Drainage Basin and the assignment of classifications to said waters will be held in the Courtroom, 2nd Floor, City Hall, New Bern, North Carolina, beginning at 9:30 A. M., EST., Friday, June 26, 1959.

The waters to be considered for classification during this hearing include that portion of the Neuse River from the Wayne-Lenoir County Line to its mouth in Pamlico Sound, Nahunta Swamp from the Wayne-Greene County Line to its mouth in Contentnea Creek, Contentnea Creek from the Wilson-Greene County Line to its mouth in Neuse River, Toisnot Swamp from the Wilson-Greene County Line to its mouth in Contentnea Creek, Pamlico and Core Sounds, and that portion of the Atlantic Ocean contiguous to the Outer Banks between the Tar-Pamlico River and White Oak River Drainage Basins, and all their tributaries comprising the Neuse River Drainage Basin from the aforementioned county lines to the Atlantic Ocean. These waters border on or flow through the counties of Beaufort, Cartaret, Craven, Greene, Jones, Lenoir, Pamlico, and Pitt.

All persons interested in the classification of the waters in the area designated are invited to attend and take part in the discussion. Persons desiring to be heard should give notice thereof in writing to the Committee on or before the date of the hearing. It is requested that, insofar as possible, any person desirous of offering lengthy comments and discussion in regard to the proposed classification of the streams be prepared at the public hearing to offer a written statement to be included in the record of proceedings.

Additional information and copies of the proposed classifications are available in the office of the Division of Water Pollution Control, State Board of Health, Raleigh, and may be obtained upon request.

STATE STREAM SANITATION COMMITTEE

E. C. Hubbard

E. C. Hubbard, Secretary

PROCEEDINGS OF PUBLIC HEARING HELD IN
NEW BERN, NORTH CAROLINA, ON JUNE 26, 1959

Note: (The hearing, for the purpose of considering the proposed stream classifications for the Neuse River from the Wayne-Lenoir County Line to its mouth in Pamlico Sound, Nahunta Swamp from the Wayne-Greene County Line to its mouth in Contentnea Creek, Contentnea Creek from the Wilson-Greene County Line to its mouth in Neuse River, Toisnot Swamp from the Wilson-Greene County Line to its mouth in Contentnea Creek, Pamlico and Core Sounds, and that portion of the Atlantic Ocean contiguous to the Outer Banks between the Tar-Pamlico River and White Oak River Drainage Basins, and all their tributaries comprising the Neuse River Drainage Basin from the aforementioned county lines to the Atlantic Ocean, was called to order in the Courtroom, 2nd floor, City Hall, New Bern, North Carolina, at 9:45 a. m., EST, with approximately 40 persons present, including the following members of the Committee: J. V. Whitfield, Chairman; Mrs. Karl Bishopric, Vice-Chairman; Scott B. Berkeley; H. Grady Farthing; P. Greer Johnson; B. C. Snow; T. B. Upchurch, Jr.; and J. N. Vann. Members of the staff present were: E. C. Hubbard, Director, Division of Water Pollution Control, and Secretary to the Committee; William R. Clary, Chief, Stream Study Section; J. C. Millsaps, Sanitary Engineer, Stream Study Section; J. R. Taylor, Chemist, Stream Study Section; T. F. Armstrong, Sanitary Engineer, Pollution Control Section; A. C. Turnage, Sanitary Engineer, Pollution Control Section; and Mrs. Marjorie T. Carmichael, Recording Secretary.)

Mr. J. V. Whitfield, Chairman, State Stream Sanitation Committee, Wallace, North Carolina, Presiding: It is indeed a pleasure to be here in the famous City of New Bern. I believe we don't call it Newbern anymore; we call it New Bern. Is that right? Anyway, it is one of our most historic spots, one of our most historic shrines. It's always a pleasure to come whether on pleasure or on business; and we, of course, are here today on business, but we are going to have some pleasure with it because you've got some spots we must visit before we leave here. Instead of hurrying off this afternoon when we get through, as we frequently do, we are going to spend the night here with you so we can see some of these historic spots that some of us may not have seen. Of course, this afternoon we are going to take a little voyage down the River to inspect some of the shellfish grounds around Oriental and Vandemere which we understand have become infected. One of the things we are anxious to do is to clean up the shellfish grounds along our coasts, because we are destroying wealth when we permit them to become polluted. We have one area of 5,000 acres that has been polluted, and you can't sell shellfish from those grounds. Just think what our income in that area is missing. We hope to have that back on the market within the next four to five years. That may seem like a long time, but you can't undo pollution by pressing a button. Just remember that. Water is our most precious commodity and look how wantonly we humans are treating it, regardless of the fact that history shows us that down the years many civilizations have gone by the wayside, have fallen, because of very poor water conservation policies. Just remember that water is our most precious commodity. We are honored today by having the distinguished Mayor of your City with us. We would be very happy to hear from Mayor Stallings. Mayor.

Mr. Robert Stallings, Jr., Mayor, New Bern, North Carolina: Mr. Chairman, Members of the Stream Sanitation Committee, Members of your staff and other visitors, we are delighted to have you meeting in New Bern this morning. We know that you are here on business; and we hope, however, that you will return many times, not only on business, but for other reasons, such as pleasure. We feel that your objective in being here today is a progressive one. We are glad to have you, therefore, for that reason as well as for others. If there is anything that we can do for the comfort of you, your committee, your staff or for other visitors today, we welcome the opportunity. We hope your visit is pleasant, and we hope it is successful. Thank you for being here.

Chairman Whitfield: Thank you, Mr. Mayor. We appreciate those remarks very much indeed. We also have the distinguished Senator, Senator Simpkins, your Senator, here with us. We would be very happy, Senator, to have any remarks you may care to make. Please come to the microphone.

The Honorable James O. Simpkins, State Senator, New Bern, North Carolina: I talked myself out last time I went to Raleigh, and I'm just glad to be here to see what the Board does.

Chairman Whitfield: Well, Senator, I had never heard of you politicians talking yourselves out before. I know what you mean; I served five terms up there. I know toward the end you get tired of talking even though sometimes you have to talk to people. Now we are here today on a mission that is important to you and the State of North Carolina. The State Stream Sanitation Committee is not, as I've said many, many times, a punitive board or committee. You might say we are "doctors of sick streams." We have come here to sit down and tell you what the trouble is in Neuse River. Yesterday we were at Goldsboro, and we told them the trouble, the story, from the source of the River down to the Lenoir County Line. Today we are going to tell you of the trouble from the Lenoir County Line to the mouth.

We are proud of the fact that we have classified over half of the streams of North Carolina and have not had to hail anyone into court. Now that does not mean that we could not have done so if we had wanted to be technical; but we proceed on the hypothesis that fair men, if treated fairly and shown the facts, will act accordingly. I believe it was St. Paul who stated somewhere in Galatians that "if righteousness comes by law, Christ has died in vain." In other words, if you are made to do a thing against your will, even though it's necessary to do that to you, you still apparently haven't seen the facts involved. What we try to do is to show you, as a State Agency, what our duties are, and what our program means to you, and above all what it means to the State of North Carolina. Our decisions are always made, to the best of our ability, to get results as they affect North Carolina, not just one segment of North Carolina but the whole State. Throughout this State of ours we have all types of topography. If we had the pollution in the Neuse River that we have in the Pigeon and the French Broad, you couldn't live in New Bern, because the topography is different. In other words, the French Broad and Pigeon can stand about five times more pollution than the topography in this area along the River permits, because the topography of those areas lends itself to the rapid assimilation of pollution by the rapidly flowing rivers. So you see, there are a lot of different angles to this business of conservation and keeping your water clean, keeping it usable. There's one thing we must always bear in mind, that regardless of how much water we have, if we can't use it, it is valueless. And when we pollute it so it can't be used, then we have tolled the death knell for our

civilization. That is why it is so important that we clean up the streams of North Carolina and of the nation. And, incidentally, our water engineers tell us that it will take from $10 billion to $12 billion to clean up the streams of this nation of ours.

May I point out to you some figures, some statistics - true statistics - that you should always bear in mind. At the beginning of the century this nation used 41 billion gallons of water daily. In 1945, we used 150 billion gallons daily - billion - not million but billion. In 1957, we used 250 billion gallons daily. Now the engineers tell us that by 1980 this nation of ours will need a minimum of 400 billion gallons, and could need up to 600 billion gallons daily. Now where are we going to get that water? Well, there are several sources from which we are going to get it, or could get it, I'd say. First, our watersheds. Every watershed in the State, every watershed in the nation should be put and kept in tip-top shape so that it will aid us in getting the maximum water from that source. Then, too, we must learn to try to get more water from the clouds. Nine times the amount of water passes from the Pacific Ocean to the Atlantic Ocean in the form of clouds than is precipitated as rain. In other words, we get only one-tenth of the water in the clouds that pass over us from the Pacific to the Atlantic. The other nine-tenths escape us. Now maybe it should, but researchers should tell us how to get some of that water without endangering global precipitation. Nuclear power, when it gets cheaper, perhaps will make it possible for us to get water from the sea at a reasonable cost. Today we can turn sea water into fresh water, but only at a pretty high cost. Then we must provide more dams, not necessarily great big dams all the time - we need some of those - but small dams to catch the water where it falls and keep it as long as possible for conservation purposes.

But remember this: we are going to get most of this water we need by cleaning up our streams and using the water we have over and over again. That is why it is so highly important that every citizen of this State, every citizen of this Nation realizes and knows what the situation is in regard to our water supply. Pollution should be looked upon as the most wanton of non-conservation practices. We must keep our streams, the major source of our water, clean so we can use them. When we do that to the maximum, we will get more water that way than we will in any other form. Just remember that. Now you might say well, maybe we can't pay for all of this; but you are going to have to pay for it or go out of business. I know sometimes cities particularly feel that their indebtedness is so high they can't even afford additional necessities; but we must, because if there's one necessity that we can't get along without, it is water. So there's no use to talk about economizing on providing yourself with adequate sewerage facilities and adequate water supplies. You don't want to be like an old fellow at a church near my home - he's the richest man in this little church and yet he was the most penurious. The church needed repairing, and so they had a day appointed when they were going to make pledges. During the conference everybody made their pledges except this good brother, and finally they got enough nerve to ask him - he could have built a new church - "How much will you give, Brother?" He said, "Fifty cents." About that time a piece of ceiling hit him on the head and he said, "I mean fifty dollars." One emotional deacon said, "Hit him again, Lord, hit him again." Now you may have to do that sometimes to some of the members of your town board, if they put any road-blocks in the way of cleaning up your situation whenever it needs cleaning up.

We are here to tell you the story, as I stated, from the Lenoir County Line to the mouth of Neuse River. We have certain rituals, you might say,

we have to go through with to conform with the law. We don't want some lawyer in the future to say well, you didn't tell us that and you didn't tell us this. It may seem kind of tiresome, kind of dry, if you have to sit and listen to terms over and over again. We must comply with the law. As you know, ignorance of the law is no excuse; so we have to comply with our part. So please bear with us even though some of this has to be dry. Mr. Hubbard will present the next phase of this hearing and will make it just as pleasant as he possibly can. Mr. Hubbard.

Mr. E. C. Hubbard, Director, Division of Water Pollution Control, and Secretary to the Committee: Mr. Chairman, members of the Committee, and gentlemen. I want to open my remarks by expressing our appreciation for your attendance at the hearing. I also want to publicly thank Mayor Stallings and Mr. Clifford Pace, the City Manager, for helping us arrange for the public hearing this morning. They have provided all of the facilities that we could possibly ask for, and we are certainly grateful to them for having done so. This is the second of two public hearings that are being held in the Neuse River Basin for the purpose of discussing the suggested classifications to be assigned to the waters of the Basin. The first hearing was held yesterday morning, as some of you know, in Goldsboro. I see that we have a few persons present today who attended yesterday's hearing. They may have to listen through the same presentations again today, but I hope they will bear with us.

The hearing this morning will deal with that portion of the River Basin that was described in the Legal Notice, and as shown here on the map. As Mr. Clary points it out, I will describe it as it was outlined in the Legal Notice. This portion will include the main stem of Neuse River from the Wayne-Lenoir County Line to Pamlico Sound; Nahunta Swamp from the Wayne-Greene County Line to its mouth in Contentnea Creek; Contentnea Creek from the Wilson-Greene County Line to its confluence with Neuse River; Toisnot Swamp from the Wilson-Greene County Line to its confluence with Contentnea Creek; Pamlico and Core Sounds, on the eastern border; and that portion of the Atlantic Ocean which extends between the boundries of the Tar-Pamlico River Basin and the White Oak River Basin. These waters either flow through or border on the following counties: Beaufort, Carteret, Craven, Greene, Jones, Lenoir, Pamlico, and Pitt. That describes the area we have under consideration at this hearing.

Our detailed comprehensive studies were recently completed and compiled. The report was issued and has been sent to those people on our mailing list and those people concerned with problems of pollution abatement or water supply as shown in the data collected during a period of extensive sampling and tedious fieldwork.

I believe that most of you have already had copies of the report, and perhaps you have had an opportunity of studying those reports. If not, copies are available; and if there's anyone present this morning that has not had a copy and would like to have one at this time, I believe that we could furnish a copy of the report to you. Mr. Millsaps, do you have some copies of the report? Mr. Millsaps indicates he does have extra copies; therefore, if there is anyone here who would like a copy of the report, he will bring it to you.

Chairman Whitfield: If anybody wants a copy, please hold up your hand.

Mr. Hubbard: Please indicate that you want a copy, and Mr. Millsaps will provide a copy for you. We will be glad for you to have it.

As is common practice in holding hearings of this type, we have elected to divide the hearing into three portions. The first portion, that which I am trying to present at the present time, will consist of a discussion of the policies and procedures followed by the Committee in carrying out its overall program of Stream Sanitation, starting with the basic studies and extending through to the establishment of corrective measures.

The second portion will be that of presenting the basic data, the technical data in summary form as contained in the report that we've referred to. This report contains all of the factual data obtained during our two- or three-years study of the River; and I hope that those who have had the opportunity to study it will have in mind any comments that they would like to make with reference to the recommendations or the findings. Most certainly those of you who have not seen the report will be able to hear from Mr. Clary in the next portion of this hearing the summary of the data and a summary of the recommendations in the report particularly pertaining to the matter of classifications to be assigned.

The third portion of the hearing will be devoted to comments from those present. You are invited to offer any advice or recommendations that you may have to the Committee during the third portion of the hearing. Incidentally, that is the most important portion of the hearing, because we have learned through our studies only the basic data, and have not been able to determine the recommendations of the public. The purpose of this hearing is to get your reactions to our recommendations, and in turn, your recommendations to the Committee as to what kind of stream sanitation program you want, what kind of classifications you wish assigned to the waters in your area, and also for what usage you wish those waters protected. I hope that each of you will avail yourself of this opportunity, not to tell me, but to tell the Committee your wishes in these important matters.

At this time I think it well to emphasize the fact that this hearing is not held for the purpose of discussing pollution abatement needs of any industry or any municipality. Those needs can only be determined after the Committee has decided what classifications should be assigned to the streams in question, and also what quality of water must be maintained in the streams at any given point. Therefore, to attempt to discuss what the particular pollution abatement needs might be for the City of New Bern, for instance, would be presuming what the final decision of the Committee will be, which of course we would not like to be guilty of doing. Therefore, if you have problems that you wish to discuss with reference to your particular waste treatment needs, please reserve those until a later date and until the streams have been classified. In connection with my statement that this is your public hearing and that we invite your comments, you were given a blank form to complete when you entered the room. These forms serve two purposes: one is to get an accurate list of the people in attendance, while the second, and most important, is to give you an opportunity of indicating to me whether or not you would like to be recognized for comments. Now, if you completed the form and failed to indicate a desire to speak and you decide that you should speak during the proceedings and wish to do so later, you will be given an opportunity to do so because we want to have your comments.

(In answer to a question at this point by an unidentified visitor - he did not come to the microphone - Mr. Hubbard advised further as to the purpose of the hearing.)

Mr. Hubbard: This is the hearing for considering the classifications, but not the hearing to discuss pollution abatement needs, because we can't define these needs until we determine what classification and what water quality we have to maintain for a particular stream. In other words, the degree of treatment, the amount of treatment required will depend upon the quality of water that will have to be maintained under the Committee's ruling. So this hearing is for the purpose of discussing classifications.

Chairman Whitfield: The classifications that we have recommended are tentative, and we've come here to secure your views. If you object to these classifications, we will be glad to hear your suggestions; then we make the final classifications.

Mr. Hubbard: As Senator Whitfield mentioned in his opening remarks, there are certain procedural requirements that we must follow in conducting a hearing of this type. There are certain studies to be made; there are certain procedures to be followed in carrying out our program. I think, although this may be repetitious to some of you, the rest of you will be interested in learning the procedures the Committee must, according to the Statute, follow in carrying out our program.

Mayor Scott B. Berkeley, Member, State Stream Sanitation Committee, Goldsboro, North Carolina: Mr. Hubbard, can everybody back there hear? Can you hear all right back there?

Mr. Hubbard: The first requirement of the Statute is that of developing and adopting a series of classifications and applicable water quality standards for assignment to the various streams of the State. Such a series of classifications and standards were adopted in 1953 as one of the first official acts of the Committee. They are applicable for assignment to any stream in the State based upon the water usage that must be made of the particular stream. We have copies of the Classifications and Standards which we would be glad to furnish anyone here if he desires a copy. Does anyone desire a copy of the Standards and Classifications? If you do, hold up your hand and we will give you a copy at this time.

The second requirement in the matter of classifying streams is that of making detailed studies to determine the significant sources of pollution, the present water quality that is found in the streams, and the present and potential "best usage" being made of the streams. This is important since the classifications are assigned on the basis of maintaining the quality of water suitable to meet the "best usage".

The third requirement of the classification program is the holding of public hearings of this type for the purpose of securing the views and recommendations of the public regarding the recommended classifications, and the assignment of official classifications by the Committee after serious consideration of the views and recommendations of the public and the facts presented in the technical report.

Finally, we come to the fourth requirement, the development of an effective pollution abatement and control program based upon the water quality requirements for each stream or each segment of a stream in keeping with its classification. That is the reason that I said earlier we cannot determine what degree of treatment will be required at any particular source of pollution until after the streams have been classified. Once the streams have been classified, it has been the policy or procedure of the Committee to develop what we have chosen to call a Comprehensive Pollution Abatement Plan. In the case of the Neuse River, that plan will start with the polluter in the uppermost reaches of the Basin, and would take each succeeding polluter downstream in order. It will discuss the magnitude of the pollution, the problems relating to that source of pollution, and will indicate, in general terms, the pollution action to be taken by the particular owner of the source of pollution. Therefore, it's a comprehensive plan with everybody in the Basin doing their relative share toward improving the water resources within the area. It is not something that is required by one person and excused by the other person. It's something that we all do, or should do, at one and the same time, within reason and with regard to the magnitude and complexities of the problem.

In your study of the Neuse River Basin Pollution Survey Report, you will find that there are many, many samples, or rather the results of analyses of many, many samples reported. You will find data relating to existing sources of pollution, and you will also find data relating to our field investigations with reference to stream uses. These data, which we believe constitute the best information obtainable, certainly at this time, are factual data which have been secured by working with the various people interested in the problems of water resources in the Basin.

You will also find that there are many different kinds of pollution that affect the stream. I would like to mention some of the effects of the different types of pollution. First, we have pollution such as municipal sewage which increases the bacterial content of our waters. Second, we have pollution which reduces the oxygen; that may be sewage or industrial organic waste. Then we have pollution which introduces solids or color matter or acids which tend to either create sludge banks and unsightly floating conditions, or color our streams to the extent that they become objectionable from that standpoint, or destroy animal life. We also have other types of pollution that visually would appear to be innocuous but may contain poisons which are detrimental to fish life and detrimental to fish food. Therefore, the matter of determining the type of treatment to be provided is one of evaluating all of these conditions, and then coming forward with a decision as to what must be done to protect the water resources in keeping with the uses the waters must serve.

Another problem that we have to face in determining treatment needs and in determining water usage, is the matter of stream flows, and it's a very serious matter. As all of you know, in the summertime when the temperatures are high,our streams flows are usually lowest, and will therefore provide less dilution and less assimilative capacity to take care of introduced waste. In the wintertime when the temperatures are low and the dissolved oxygen is high, we usually have our rainy season; therefore we have more water and the problem is not as acute. Inasmuch as we have that situation existing, we must base our design of any corrective measures that we intend to install, upon the most critical period in order to protect the stream

under all conditions. We also have the problem further aggravated and made complex by the construction and operation of large reservoirs, some of which do not provide for minimum releases. Some, because of thermal stratification, may discharge water of considerably lower quality than was flowing into the reservoir in the first place. While large reservoirs, in my opinion, are going to be necessary, future consideration, I think, will include not only provisions for flood control or power production but provisions for drought control as well. We need to store water during times of plenty and under such conditions that it may be discharged in times of drought to provide the dilution water and the water for all of the many uses of a complex civilization.

We are also presented with a problem in determining pollution abatement needs in streams that are affected by tides, such as you have here to some extent, wind tides particularly; because the tide tends to hold the pollution in the immediate vicinity at times and then discharges it on an outgoing tide, which makes the problem even more complex from the standpoint of designing, operating, and maintaining adequate waste treatment facilities.

We know and you know that water has many, many valuable and necessary uses. Among those, I will mention about six of primary usage, six that are considered to be of necessity and are absolutely essential to our development. The first is the provision of adequate water as sources of domestic water supply. We must have that in order to survive. Second, we must have and use our water as sources of supply for industrial purposes. Third, we must also maintain our water and use it as a source of water for agricultural purposes. Irrigation in particular has become a more and more prevalent water use in the Neuse River Basin as well as in other portions of the State. In fact I made this statement yesterday, and I think the statement is true: irrigation permits have been issued in some areas of the Neuse River Basin to the extent that pumpage capacity provided is sufficient to pump all of the water out of the streams if all the pumps were operated at one time. Therefore, should every irrigator decide to water his crops one morning, we'd have no flow in some of our streams in those areas where irrigation is developing rapidly. That kind of thing, of course, would completely upset the entire water resource balance of the area.

Fourth, we must also have and maintain our waters for recreational uses. You people in the coastal area are conscious of that, very much conscious of it, because our tourist business in North Carolina is about the third- or fourth-size business in the State. We must therefore work out some means by which we can protect and maintain our water suitable to accommodate our recreational program. That is particularly important in the eastern part of North Carolina.

Fifth, another important use of some of our waters, and it is not the least, is the preservation of its quality to the extent that a suitable habitat will be provided for fish, wildlife, and other forms of aquatic life.

In our attempt to obtain information as to what our water use needs are, we have worked with the County Health Departments with reference to recreational waters; we've worked with the County Agricultural Agents with reference to the matter of agricultural water needs; we've worked with the North Carolina Wildlife Resources Commission personnel with reference to waters suitable for fish life; we've made field investigations of the needs for municipal water supply and the needs for industrial water supply; and we've

also studied the need of the waters as a vehicle to carry away our waste matters. This sixth usage that we must make of our water resources is a most important one. We cannot avoid it because our sewage and our industrial waste are merely used water which must be returned to some place, and the only place that we have to return such water is in our flowing streams or tidal waters. The problem, therefore, becomes one of treating those wastes in relationship to the quality needs in such manner that the use of the stream for that purpose will not eliminate or upset the use of the stream for some of the other beneficial purposes.

There is at one time, of course, at one and the same time, a conflict of usage when we speak in terms of using the Neuse River as a source of public water supply and in the next breath speak in terms of using it as a means of getting rid of our used waste; but it's done. The City of Durham discharges treated waste into the Neuse River in the upper portion; that flows downstream and the Wake Finishing Plant owned by Burlington Mills obtains water for both domestic and industrial purposes only a few miles downstream - twenty or thirty miles below the point of discharge of the Durham waste. The City of Raleigh, the Capital City, which has just recently completed for the first time an adequate sewage treatment facility, was discharging raw sewage from seventy thousand people into the Neuse River; while twenty-six miles below, Smithfield depended solely upon the Neuse River as their source of public water supply. The Capital City, however to our great encouragement, has built a three- or four-million-dollar sewage treatment plant of adequate capacity to provide complete treatment for the protection of the water resources below the City. The City of Smithfield, in turn, does no better by its neighbor downstream than did Raleigh. It takes water from the Neuse River and discharges all of its raw sewage back into the Neuse River without any treatment. The City of Goldsboro within a short time is going to be forced to go to the Neuse River as a source of water supply; and I hate to say this since the Mayor of Goldsboro is a member of the Committee, but I think it's a fact that the City of Goldsboro is dumping all of its sewage raw into the waters that flow into the Neuse River. And again we've come to the City of New Bern; they must depend upon a ground water supply, but they do discharge every bit of their waste through multiple outlets directly into the River, and at the same time promote recreational activities along their water front in the Neuse and Trent Rivers. Those usages, of course, are diametrically opposed to one another from the standpoint of public health. Therefore, in order to make these water uses available in their fullest capacity, we must have, not a single polluter cleaning up his problem, but a uniform comprehensive program with everybody carrying his share of the load. Fortunately, in the other river basins, and we've classified half of the river basins in the State, we have obtained so far that type of cooperative voluntary approach. We have not, as yet, been placed in the position of having to issue a single order. The towns and industries have voluntarily developed programs of pollution abatement that the Committee considers reasonable and realistic, and they are going forward with it on a unified and uniform basis. It's costing a lot of money. The problem in New Bern is going to cost a lot of money, but the cost of the pollution abatement facilities will be well repaid in the protection and conservation of a resource without which we could not exist. Water is, perhaps, as important to our existence, or just as important, as the air we breathe. Also, you can live for probably a couple of months without food, but you can't live more than two or three days without water.

Neither can industry survive without an adequate supply of water. Industries and municipalities likewise cannot survive without a means of disposing of their human and industrial wastes. Therefore, this problem of our survival is one of reconciling these opposing forces to the extent that we can protect what we have, not only for our own use but as an inheritance to the people who will follow us; and I think they are due that inheritance.

Now we come to the second portion of the hearing. We can't present a 350-page report in detail this morning, and I don't think you would want us to; but Mr. Clary will briefly present some of the pertinent facts, particularly with reference to problem areas, for your consideration and knowledge, which will be followed by a detailed presentation of the classifications recommended for assignment to the waters in the lower portion of the Neuse River Basin. Mr. Millsaps, who is the man with the stick, will point out to you on the colored map, and I recognize that you will not be able to distinguish one stream from the other, but he will point out as Mr. Clary proceeds, the classifications on this map which shows all of the streams and all the waters. Now in order that you may follow him without too much difficulty, I would like to call your attention to the legend at the top of the map.

The blue color on any stream indicates that stream is recommended for a Class "A-II" classification, which is the classification assigned to surface waters used as sources of public water supply. You will see at a glance that most of the main stem of the River has been designated that classification. The orange color with the "B" by the side of it indicates that those waters are now, or will be, used in our opinion as recreational waters for bathing. You will notice that there are a number of waters so recommended for classification. Class "C", the green, is the fishing classification; in other words, those waters indicated with the green color are those recommended to be protected suitable for fishing and for fish propagation. We have next Class "D", the red color on the map, which is the agricultural classification assigned to streams used predominantly or essentially as sources of water supply for livestock or irrigation. Class "E", the black color, indicates the streams which will be dedicated to waste and sewage disposal, and maintained suitable for navigation. The fact that they will be dedicated principally to waste and sewage disposal, though, does not imply that they will be permitted to be maintained in a condition that will create a public nuisance. They will be maintained so that they will not be a nuisance from the standpoint of sight and odor.

Class "SA" comes next - the "S" preceding the other initial indicates that it is a tidal salt water. Class "SA" is the designation that is placed on waters which must be protected suitable for shellfish propagation, which is one of the highest quality waters required of any usage that we have - even higher than that required for bathing, bacteriologically speaking - because the shellfish are quite often, and more likely than not, eaten raw. It's like milk; we have to protect it to a very high quality, and the waters that are colored with yellow are those that are predominantly used as shellfish growing areas, which is a very important industry in this section of the State. The purple, "SB", is for salt water bathing; the brown, "SC", is for salt water fishing; while the black, "SD", is for navigable waters. The "SD" is for those waters that will be preserved suitable for navigation and will be used to the maximum extent, but not to the extent of creating nuisance conditions, for waste and sewage disposal.

The swamp water designation, "Swp.", indicates those areas that by the nature of the topography and the drainage area are considered swamp waters, which normally and naturally have a lower quality than the highland waters which are not degraded by the waters standing in swamps over long periods of time. So where you see the swamp water designation, or the "Swp.", you will know that indicates the waters draining areas which have been designated as swamp waters.

All of these classifications are subject to your review and recommendations. The Committee has not, and I want to emphasize this, has not concluded that these are the best classifications to be assigned. They have merely suggested that, based on our studies, they appear reasonable in the interest of our water resources. If there are streams that in your opinion should be classified other than shown, then this is your opportunity to tell the Committee of your wishes and your ideas with reference to the classifications.

Mr. Chairman, that completes my presentation. I will be glad now to call upon Mr. Clary, unless you have any comments at this time. Thank you, gentlemen.

Chairman Whitfield: Thank you, Mr. Hubbard. Just a minute, Mr. Clary. I saw Mr. Whitehurst here just a minute ago. Where is he? Has he slipped out? Well, maybe he will be back. When I started, the City Manager wasn't in here, and I noticed he came in after we got started. Has he slipped out again? I guess he has to conduct business from time to time. Is Mr. Pace in? Ask him to come back as we would like to have some remarks from him since he wasn't in here when I opened. (Mr. Pace returned to the room.) Mr. Pace, you were not in here when I began; we would be happy to hear from you and have a few remarks from you this morning.

Mr. Clifford Pace, City Manager, City Hall, City of New Bern, New Bern, North Carolina: All right, Mr. Chairman.

Chairman Whitfield: Right over here at the microphone.

Mr. Pace: Mr. Chairman and Members of the Board. I would like first simply to reiterate the welcome that Mayor Stallings gave to this group. We are very happy to have you here in historic New Bern. I would also like to second his remarks that this certainly is an objective hearing, one in a series of very progressive discussions leading to the cleaning up of our streams, thus enabling us to enjoy the full benefits of our most vital resource. Personally, I'm in a somewhat peculiar position. Almost a year ago, I attended a similar hearing on the Cape Fear when I was connected with the City of Asheboro. We were not in a worried position at all at that time because we had just completed the voting of $2 million of sewer bond authority. So we could simply smile at Chairman Whitfield and his Committee and at Mr. Hubbard and say, "We are on the way." So now I have come to New Bern and seem somewhat in the position of having to start over again on very much the same thing, but it is certainly a progressive move. I believe this is not the time when we would make any official statement. We certainly are happy to have you here, I would like to say, both personally and for the City of New Bern.

Chairman Whitfield: Thank you, Mr. Pace, for your kind remarks. New Bern is very fortunate to have you here to show them how to raise that

$2 million they are going to need to fix their plant. We are honored also this morning with the distinguished representative from Craven, Mr. Whitehurst. Sam, we would be happy to have any remarks from you at this time, please, sir.

The Honorable Sam L. Whitehurst, Representative for Craven County, Bayboro Road, New Bern, North Carolina: Mr. Chairman, ladies and gentlemen of the Committee, and guests. I would like, of course, to reiterate what Mr. Pace said, and I assume Mayor Stallings said while I wasn't present. We are mighty happy to have you here in New Bern and Craven County. I would like to say to the group that I was a member of the Legislature of 1957 when they passed the general bill for the Neuse River Basin. Of course, that act called for, and gave, municipalities and industries and individuals until 1962 to do this job. Be that as it may, we are just starting off with this report now; and I feel this way about it, and know that, and know that throughout the Neuse River Basin, and particularly here in my own home county - I recall very vividly when the bill came up, and I don't know how many people are here from Lenoir County, but there was no opposition to the bill along the entire Neuse River Basin except from Lenoir County, and we outvoted them and passed the bill - all you gentlemen are interested in cleaning up the Neuse River Basin. I realize it's a long-range program, and it will take us some time to do it; but we must have a starting point, and we must get it done. We have one of the greatest assets in the world with our natural streams here in this area of our State, and we must protect them; and I sincerely hope that the Legislature and that the municipalities and industries will all work together to get this job done sometime in the future. Thank you, Mr. Chairman.

Chairman Whitfield: Thank you, Mr. Whitehurst. If there's one word that you need in a program of this kind, it's "patience". Now that doesn't mean patience to let somebody drag their feet. You can't spend half a century polluting the streams of the State and then press a button and clean up. We know that, but there comes a time when you begin the long retreat backward up the hill that we've just gone down. That takes time. You will find that the State Stream Sanitation Committee is very reasonable. We know the financial status of New Bern just as well as you do. We know what you can do, because we work together with the Local Government Commission. We have a formula of all the towns and cities in the State we've worked out for their financial status of what they can do; and when a city tells us they can't do a thing, and we know they can, of course, all we do is show them what the Local Government Commission tells us is established. But the thing that has pleased us very much is that, with very few exceptions, everyone has cooperated 100 percent to try to work out and get on schedule. Once you start the job, of course, every month, every year, the situation gets better for your stream. Because some streams are so polluted that it would take . . . well, we had one industry, one textile industry in the State, that when we classified the streams we told them it would take them five years and $2 million to get up to our lowest classification, they were so polluted. In other words, it wasn't any use to classify the stream anything but an "E", because it would take them five years and $2 million to get up to an "E". Now, what is an "E"? "E" means you cease to be a nuisance. So, some of our streams are so polluted it takes time. Well now, for us to jump in there and tell this industry, "You've got to spend $2 million right away," would be folish, would be unfair. So I relate that instance to show you this is no overnight proposition, and all we want you to do is to understand your situation and work together with us. As I say, we usually come, and we do come at all times to help save industry and municipalities from themselves, in relation to pollution.

I guess you read in the paper the other day where a wave of dysentery had struck over East Germany, starting in East Berlin from a polluted river. Epidemics of this kind start from polluted water. I just wanted to point this fact out, and let you know that this is a serious business and that at all times we want to be at your service. Now, the next or second phase of the hearing will be handled by Mr. Clary. Mr. Clary.

Mr. William R. Clary, Chief, Stream Study Section, Division of Water Pollution Control, Raleigh, North Carolina: Thank you, Senator Whitfield. Ladies and gentlemen, I believe you will be interested in a general summary of the Neuse River Basin Pollution Survey Report before we get down to the particular areas in which you will be primarily interested. If I may, I'll just give a very brief summary of this Comprehensive Report.

This basin is so large that we had to make our maps into two sections as you have noticed. Now the area covered encompasses approximately 6,192 square miles and includes the entire watershed of the Neuse River Basin, which is that portion of the State south of the Tar River Basin and north of the Cape Fear and White Oak River Basins.

The estimated population within the Basin in 1950 was 564,000. Now Mr. Hubbard has pretty thoroughly discussed the water uses; however, more specifically, there are within the Basin 12 public surface water supplies that serve an estimated population of 245,000 with 26.5 M.G.D. In addition to this, there are 40 communities that are served by ground water supplies. These water supplies serve an estimated population of 121,000 with 12.0 M.G.D. Industries have reported the use of 2.6 M.G.D. obtained from surface water supplies and 3.8 M.G.D. from ground water supplies. This does not include surface water used for electric power plants for cooling purposes. For instance, the Goldsboro Plant of Carolina Power & Light Company uses as much as 158.4 M.G.D. during their peak production period, and returns the heated water back to the stream. On the other hand, the City of Wilson recirculates around 350,000 G.P.D. of water with just a small amount of make-up water from the City's system without discharging any water to a stream.

Now there are 88 significant sources of pollution within the Neuse River Basin. Seven are quarries with stone washing operations, resulting in highly turbid waste relatively free from organic matter. All provide treatment of this waste in the form of settling ponds, except one. The operations of this quarry have been a source of complaint, particularly the discharge of tar waste from the asphalt plant. Of the remaining 81 sources of pollution, largely organic in character, 37 provide no type of treatment, 19 provide secondary-type of treatment with an overall reduction of pollution of 77 percent, while 25 provide primary-type treatment with an overall reduction of only 18 percent. The 81 sources of pollution produce an estimated 34 M.G.D. of waste which has an estimated domestic sewage population equivalent (P.E.) of 494,237. These sources serve a total population of approximately 300,000 individuals, indicating 40 percent of this waste in terms of population equivalent (P.E.) is industrial. After treatment, a total domestic sewage population equivalent (P.E.) of 366,786 is released to the streams of the Basin. Thus, the overall reduction resulting from treatment is but 26 percent. The type of treatment varies from well-operated sand filter systems which remove up to 90 percent or more of the population equivalent (P.E.), to the grease trap that removes only a token amount.

Now if I may, let me at this point define for you gentlemen, who are not acquainted with it, this term "P.E." and a companion term "B.O.D." "B.O.D.",

which I will describe first, is called the Biochemical Oxygen Demand of water, sewage or industrial waste. It is the loss of dissolved oxygen in five days at 20°C, that's room temperature of about 68°F, of a sample in a sealed bottle. The loss of dissolved oxygen in the bottle is a measure of organic matter in the substance being tested. Now the second term, or you might say companion term, is "P.E." (Population Equivalent). This is an expression designating organic matter in sewage, industrial waste, and natural substances in water as the amount of B.O.D. (Biochemical Oxygen Demand) produced by an equivalent number of persons. It has been found that the daily activities of an individual result in the production of 0.17 pounds of 5-day 20°C B.O.D. The P.E. is determined by dividing the pounds of 5-day 20°C B.O.D. produced by an industrial waste in one day, for instance, by this term 0.17, and expressing it in terms of people. In other words, if we have a pound of 5-day 20°C B.O.D., it is equivalent to the waste from about six persons. This then becomes a useful tool to the sanitary engineer in designing waste treatment facilities and comparing sewages and industrial wastes. With this information in mind, I will now proceed to give to you a brief summary of the conditions in the upper section of the Basin as a contrast, if you please, to the conditions in the lower section. Now just very briefly, gentlemen, bear with me as I discuss the upper section.

Segment I. Neuse River and its tributaries from source to mouth of Little Lick Creek. There are within this segment 9 sources of significant pollution with an estimated P.E. of 94,063 before treatment and 20,969 after treatment which represent a reduction of pollution of 78 percent. Now, if you will recall, we mentioned that the overall reduction of pollution in the whole River Basin was but 26 percent.

Segment II. Neuse River and its tributaries from mouth of Little Lick Creek to raw water intake at Wake Finishing Plant near Wake Forest. Here we have 7 sources of significant pollution in the segment with an estimated P.E. of 3,819 before treatment and 3,239 after treatment which represent an overall reduction of pollution of 15 percent.

Segment III. Neuse River and its tributaries from raw water intake for Wake Finishing Plant near Wake Forest to mouth of Beddingfield Creek near Clayton. Now there are within this segment 11 sources of significant pollution which have a total P.E. of 189,846 before treatment, and discharge a P.E. of 175,891 to various streams with an overall reduction of pollution of but 7 percent. It should be noted that these figures reflect the conditions prior to the construction of the Raleigh secondary-type sewage and industrial waste treatment plant. As Mr. Hubbard has pointed out, the conditions are presently greatly improved over the findings at the time we made our studies.

Segment IV. Neuse River and its tributaries from mouth of Beddingfield Creek to mouth of Little River. There are within this segment 10 sources of significant pollution which have a total P.E. of 17,066 before treatment and discharge a P.E. of 16,760 to the streams after an overall reduction of but 2 percent. You see, there is quite a contrast as you go downstream.

Segment V. Neuse River and its tributaries from mouth of Little River to Wayne-Lenoir County Line, those portions of Contentnea Creek and Toisnot Swamp west of Wilson-Greene County Line, and that portion of Nahunta Swamp west of Wayne-Greene County Line. There are within this portion of Segment V, and the remaining portions will be discussed presently, 15 sources of significant pollution. They have a total P.E. of 73,967 before treatment, and a P.E. of 54,232 after treatment. This is an overall reduction in pollution of 27 percent. This poor showing is in part due to poor operation of existing treatment facilities. That

is really a very sad commentary. This briefly brings us up to the discussion in which you gentlemen are primarily interested today.

Mr. Hubbard has very thoroughly discussed with you the meaning of the various classifications, including the definition of swamp waters, and has noted the fact that as we get in the vicinity of your area here you run into salt water where the classifications are preceded by the term "S".

Now our first point of discussion this morning with you gentlemen begins with Segment V. Neuse River and Its Tributaries East of Wayne-Lenoir County Line to Streets Ferry, Including Those Portions of Nahunta Swamp East of Wayne-Greene County Line, and Those Portions of Contentnea Creek and Toisnot Swamp East of Wilson-Greene County Line to Their Respective Mouths.

Public Water Supplies From Surface Sources and Recreation:

There are no public water supplies taken from surface sources within this part of the Segment,and you will note from our discussion that no surface water supplies for public consumption are located below these county lines all the way to the sound. There are no known public recreation areas within this part of the Segment, although, as discussed yesterday, there are recreation areas west and north of these lines.

Fishing:

The following streams have been recommended by personnel of the North Carolina Wildlife Resources Commission to be classified "C". All streams within this part of Segment V, with the exception of Neuse River to the mouth of Contentnea Creek and Hardy Mill Run, will be designated as swamp waters. This means that the dissolved oxygen requirements are 3 ppm instead of the 4 ppm required for non-swamp waters, and the pH may be as low as 4.3. The recommended streams are:

Neuse River.
Southwest Creek from N. C. Hwy. #12 to mouth.
Stoneyton Creek from Jericho Run to mouth.
Mosley Creek from N. C. Hwy. #55 to mouth.
Contentnea Creek.
Little Contentnea Creek.
Core Creek from N. C. Hwy. #55 to mouth.

Irrigation:

Very little water is taken from Neuse River for irrigation; however, a number of the tributaries are so used.

Sources of Significant Pollution:

There are within this Segment, now remember this is a portion of a Segment, 17 sources of significant pollution which have a total P.E. of 67,380 before treatment,and release to the various streams a P.E. of 65,044 after receiving an overall reduction of but 3 percent in the pollutional characteristics of the wastes. These sources are described as follows:

Source	Type Treatment	P.E. Before Treatment	% Removed by Treatment	Receiving Stream
Town of LaGrange	Primary	800	30%	Mosley Creek
Kennedy Home Orphanage	None	200	0	Falling Creek
Frosty Morn Meats, Inc.	Grease Traps	18,798	-	Neuse River
Caswell Training School	None	3,420	0	Neuse River
2 Bottling Companies in Kinston	None	605	0	Neuse River
City of Kinston	None	30,268	0	Neuse River
Kinston Power Plant	None	Cooling Water Only		Neuse River
Burketts Slaughter House	None	300	0	Neuse River
Stallings A.F.B.*	Secondary	1,000	95%	Stonyton Creek
Dobbs Farm	Secondary	100	85%	Briery Run
E.I. du Pont de Nemours & Co.				
I.W.	None			
D.S.	Primary	5,720	-	Neuse River
Snow Hill	None	875	0	Contentnea Cr.
Hookerton	None	250	0	Contentnea Cr.
Walstonburg	Secondary	294	75%	Tributary to Little Contentnea Creek
Fountain	Secondary	400	0	Longs Mill Run
Farmville**	Primary	3,000	10%	Little Contentnea Creek
Grifton	Primary	1,350	10%	Contentnea Cr.

*Stallings A.F.B. has been de-activated as a military base since the stream study. The airfield is now being used as a municipal airport for the City of Kinston; however, the utilities are being maintained on a stand-by basis.

**Since the stream study was made, the Town of Farmville has completed and put into operation a new secondary type treatment plant.

Pertinent Proposed Classifications:

Neuse River, less tributaries from Wayne-Lenoir County Line to mouth of Contentnea Creek - "C".

Southwest Creek from N. C. Hwy. #12 to mouth - "C-Swp." (Now Swp. refers to Swamp Water designation.)

Stonyton Creek from mouth of Jericho Run to mouth - "C-Swp."

Mosley Creek from N. C. Hwy. #55 to mouth - "C-Swp."

Neuse River and tributaries, less a portion of Core Creek, from mouth of Contentnea Creek to Streets Ferry - "C-Swp." (Now, if you'll note, we have added the designation of Swamp Water for this section of Neuse River which is recommended for a fishing classification "C".)

Core Creek to N. C. Hwy. #55 - "D-Swp."

Contentnea Creek and Little Contentnea Creek - "C-Swp."

Those are the main classifications which I believe will be of interest to you gentlemen today.

Next we have Segment VI. Neuse River and Its Tributaries from Streets Ferry to a Line Across Neuse River from Johnson Point to McCotter Point.

Public Water Supplies From Surface Sources:

None as was indicated previously.

Recreation:

There are two public bathing areas in this Segment located on Trent River adjacent to and near the Trent Pines Country Club. A small area at the club has been used for bathing for some time, while the City of New Bern has recently constructed a bathing area a short distance east of this area. In addition, a large section of the river is used extensively for water skiing. As noted in the report, the use of these waters for bathing and water skiing should be prevented until such time as the pollution in Trent River and Wilson Creek has been removed or properly treated. There are several private beaches adjacent to homes on Neuse River, but swimming should be discouraged at these beaches because of the proximity of untreated sewage and industrial waste from the New Bern area.

Fishing:

The following streams have been recommended by personnel of the North Carolina Wildlife Resources Commission to be classified "C". All streams in this Segment have been designated as "Swamp Waters", and, therefore, the recommended classifications will have the Swamp Water designation "Swp." Now the recommended streams are:

Swift Creek and its tributaries from mouth of Clayroot Swamp to mouth.
Trent River.
Tuckahoe Swamp.
Beaver Creek.
Crooked Run.
Mill Run.
Mill Creek.
Island Creek.
Brice Creek.

The following streams, and portions of streams, have been designated by the Department of Conservation and Development as Commercial Fishing Waters:

Neuse River below Pitch Kettle Landing.
Trent River below Wilson Creek.

You will notice in each case that while the streams are recommended for classification "C", the Department of Conservation and Development has designated only areas below certain points as being Commercial Fishing Waters.

Irrigation:

Neuse River does not appear to be a source of water for irrigation in this Segment; however, water for this purpose is derived from the headwaters of Trent River, Swift Creek, and Batchelder Creek.

Sources of Significant Pollution:

There are within this Segment nine sources of significant pollution which have a total P.E. of about 28,049 before treatment,and release to the streams a P.E. of approximately 27,664 after receiving an overall reduction in pollution of but 2 percent. Now please contrast this with reduction in the whole river

basin of all the known points of significant pollution of 26 percent; and there were some at the time of our study, you will remember, as high as 78 percent in relation to the individual segments. These sources are as follows:

Source	Type Treatment	P.E. Before Treatment	% Removed by Treatment	Receiving Stream
Town of Winterville	Primary	800	20%	Nobels Canal
Town of Ayden*	Primary	2,250	10%	Tributary to Swift Creek
Lutz and Schramm, Inc.	None	6,300	0	Tributary to Swift Creek
City of New Bern	None	14,777	0	Neuse River & Trent River
Craven Log & Veneer Co.	None	Unknown	0	Neuse River
N. C. Veneer Co.	None	Unknown	0	Neuse River
Town of Trenton	None	250	0	Trent River
New Bern Provision Co.	Grease Traps	3,672	-	Wilson Creek
Nello L. Teer, New Bern Quarry	Settlement	Inorganic Waste	0	Brice Creek

*Since the stream study was made, the Town of Ayden has completed a secondary-type sewage treatment plant.

Pertinent Proposed Classifications:

Now here we will begin to get into the salt water or tidal area.

The pertinent proposed classifications are as follows:

Neuse River - "SC-Swp."
Swift Creek to Clayroot Swamp - "D-Swp."
Swift Creek from Clayroot Swamp to Bear Branch - "C-Swp."
Swift Creek from Bear Branch to mouth - "SC-Swp." (You will note that here, to our best information, we have the upper limits of the salt water intrusion; and therefore we do have a change, not in the classification as such for the protection of fishing but in the designation.)
Batchelder Creek from a point one-half mile upstream from U. S. Hwy. #70 to its mouth - "E". (Now, as Mr. Hubbard pointed out, this classification relates to the use of a stream for disposal of waste provided no nuisance occurs,and for navigation. This classification has been recommended for that portion of Batchelder Creek which is proposed to receive the treated effluent from the proposed installation of Union-Bag Camp Paper Corp. Now we have a representative of this firm here today,and I hope he will comment upon this situation.)
Trent River to Deep Gully - "C-Swp."
Tuckahoe Swamp; Beaver Creek, Crooked Run, Mill Run, Mill Creek, Island Creek, and Brice Creek; all tributaries to Trent River - "C-Swp."
Trent River from Deep Gully to Brice Creek - "SB-Swp." (You will recall that "SB" refers to the bathing classification.)
Trent River from Brice Creek to mouth - "SC-Swp."

Now, you ladies and gentlemen who have the report, thanks to our friend, Mr. Clifford Pace; he very kindly called our attention to an omission and that refers to Trent River from Brice Creek to mouth. The classification recommendation I have just given you, which is "SC-Swp.", refers to this omission

from the report. We regret very much that we omitted that classification from our report, and we want to thank Mr. Pace for calling it to our attention.

Next is Segment VII. Neuse River and Its Tributaries from a Line Across Neuse River from Johnson Point to McCotter Point to a Line Across Neuse River from Wilkinson Point to Cherry Point.

Public Water Supplies from Surface Sources and Recreation:

We have no surface public water supplies in this Segment, but we have a great deal of recreation and potential recreation. Because of the numerous beaches and camps, both public and private, which are located within this Segment, it is recommended that the entire Segment be classified for recreational purposes. The known public recreation areas are as follows:

Camp Croatan on southwest shore.
Flanner Beach on southwest shore.
Kendall Beach on northeast shore.
N.C.O. Club on Slocum Creek.
Minnesott Beach on northeast shore.
Shady View Beach on southwest shore.

I would just like to call your attention to one item. I just said, "It is recommended that the entire Segment be classified for recreational purposes." Now we are not recommending that for Slocum Creek which is subject to pollution from three sewage treatment plants.

Fishing:

The following streams, and portions of streams, have been designated by the Department of Conservation and Development as commercial fishing waters:

Neuse River.
Upper Broad Creek below lower side of Flatty Creek.
Goose Creek below the narrows.
Beards Creek below a point three-fourths of a mile above mouth.
Slocum Creek below mouth of Tucker Creek.
Hancock Creek below government boat house.

Irrigation:

There are no known streams used for irrigation in this Segment.

Sources of Significant Pollution:

There are four significant sources of pollution within this Segment, all located on Slocum Creek at or near the Marine Air Station. They have a total P.E. of about 20,507 before treatment, and a P.E. of approximately 3,020 after treatment. This is an overall reduction of 85 percent. I would like to point out that you will note as I read this table to you that this high reduction is largely due to the installation of the Cherry Point Marine Air Station.

Source	Type Treatment	P.E. Before Treatment	% Removed by Treatment	Receiving Stream
Slocum Village	Secondary	3,200	70%	Slocum Creek*
Havelock Park	Primary	507	25%	Slocum Creek
Cherry Point Marine Air Station	Secondary	16,800	90%	Slocum Creek
Airplane Repair Shops	None**	Unknown	0	Sandy Branch

*We understand that the Navy has recently taken over the Slocum Village plant and is now modernizing it.

**Since the stream study was made, an industrial waste treatment plant has been installed and is now in operation.

Now Slocum Creek is rather important to us as the pollution therein may affect the bathing areas in Neuse River in that vicinity, and some improvement will have to be made at the sewage plants other than the one at the Cherry Point Marine Air Station. I would like to note, however, that the efficiency of the industrial waste treatment plant at the Marine facility has not, as yet, been determined; and the number of coliform bacteria below the Marine facility sewage treatment plant is higher than desirable at times.

Pertinent Proposed Classifications:

Neuse River, less tributaries - "SB-Swp." (That is a swamp water designation for the bathing areas there. Now, we feel that this is a very important area to New Bern and vicinity and the State of North Carolina.)

Neuse River tributaries, less Southwest Prong and East Prong of Slocum Creek and portions of Broad Creek and Goose Creek - "SC-Swp."

Southwest Prong and East Prong Slocum Creek - "C-Swp." (Now, the difference between those two is the point of departure from the salt water intrusion and fresh waters coming from the upper reaches of the watershed.)

Broad Creek to N. C. Hwy. #55 - "C-Swp." (There again we have a stream with fresh water in the upper section and salt water in the lower section.)

Goose Creek to Scotts Store Road - "C-Swp."

Now those are the main classifications in this particular area for which we have recommendations.

Next we have Segment VIII. Neuse River and Its Tributaries from a Line Across Neuse River from Wilkinson Point to Cherry Point to Its Mouth and Pamlico Sound and Core Sound and Their Tributaries Within a Line Beginning at Little Porpoise Point and Extending in a Southeast Direction to the Southwest Tip of Ocracoke Island; Thence Southwest Along the Ocean Side of the Outer Banks to the Southwest Side of Drum Inlet; Thence in a Northwest Direction to Hall Point.

In other words, the above just encompasses a rather large area of the Sound, the Outer Banks, and that portion of the Atlantic Ocean contiguous to the Outer Banks. I regret, ladies and gentlemen, that our map does not extend to the Outer Banks; but you are quite familiar with this area, I am sure.

General Statement:

This final Segment of the River is almost entirely used for commercial

fishing and for shellfishing, and is a very valuable asset to the State of North Carolina. Because of the swampy and marshy condition of the land, there is no practical use for irrigation. There are few farms in that area, except possibly in the very upper parts of the uplands. There is only one known significant point of pollution in this area. This is the Bayboro Dehydrating Company that discharges partially treated industrial waste into a ditch that flows into a swampy section of Whitehurst Creek. That's just off the map, isn't it, Joe, right up there on Bay River?

Recreation:

There are three known public recreation areas within this segment. These are as follows:

Camp Sea Gull.
Camp Don Lee.
Camp Caroline.

You notice they are all located within the general vicinity of coastal waters which have a recommended classification of "SA-Swp." You remember that Mr. Hubbard advised that such waters were being protected for shellfishing purposes for market use. That automatically, then, protects the stream for bathing.

At Camp Caroline there is bathing in Neuse River and in the mouth of Dawson Creek. Bathing is restricted to artificial pools at Camp Sea Gull and Camp Don Lee; however, the River is used for other water sports such as skiing and boating. In addition to these camps, the greatest potential bathing areas in this Segment are at the sandy beaches of Cedar Island and Hog Island, which are relatively undeveloped as yet.

Fishing:

The following streams, and portions of streams, have been designated by the Department of Conservation and Development as commercial fishing waters:

Clubfoot Creek one and three-fourths miles above mouth.
Dawson Creek three-fourths mile above mouth.
South River below the forks.
(Lower) Broad Creek below the old mill site.
Bay River below Bayboro.
Pamlico Sound.
Core Sound.

Pertinent Proposed Classifications:

The entire Segment, with the exception of only four sections, has been recommended as Class "SA-Swp." Because of the high bacteriological standards of the "SA" classifications, the bathing areas and potential bathing areas will be well protected as just noted by me. The exceptions to the "SA-Swp." classifications are:

Dawson Creek from source to mouth of Tarkiln Creek and Tarkiln Creek - "SC-Swp."

The Oriental restricted area - "SC-Swp." This area includes Greens Creek, Kershaw Creek, Smith Creek, Morris Creek, Camp Creek, Shop Gut, Raccoon Creek, Oriental Harbor, and a small segment of Neuse River contiguous to the mouth of Greens Creek extending 100 yards into Neuse River. Now, I might point out that this area has been closed by the State Board of Health, on its recommendation, that is, for the taking of shellfish for market purpose for human consumption because of the pollution in that area in the vicinity of Oriental. (In this connection, I would like to call your attention to a typographical error on page 29 of the report. If you will kindly refer to the fourth paragraph, second line, the word "years" should be changed to read "yards". Now I want to thank our good friend, Mr. Vann, for calling that to our attention. Mr. Vann has very thoroughly read our report.)

Bay River and its tributaries from source to a line across Bay River from Darby Point to Bell Point - "SC-Swp."

The waters of the Atlantic Ocean contiguous to that portion of the Neuse River Basin that extend from the southwest tip of Ocracoke Island to the southwest side of Drum Inlet - "SB". That would be the salt water classification without a swamp water designation. (In this connection, I would like to again call your attention to the report. Please refer to page 311, Item NN, and strike out the letters "Swp." which were inadvertently included in the proposed classification for the Atlantic Ocean.)

Now, just a word about the classification of waters used for irrigation. For the sake of brevity, I have not referred to the classification of such waters. It should be noted, however, that all waters naturally suited for this purpose are adequately protected by the recommended classifications, except for the lower section of Batchelder Creek which is classified "E".

This, Senator Whitfield, concludes our presentation of the second portion of the hearing.

Chairman Whitfield: Thank you, Mr. Clary. Now, ladies and gentlemen, you see there is nothing spectacular in our work, but the test tube results are there. The doctor is ready to prescribe. Now please understand that it takes about three years to prepare a report like this. This is no haphazard hasty action. I was very amused some months ago - I was talking to one of the members of a pollution agency of another state, and naturally we were discussing about preparing reports and getting ready; and I was telling him it required anywhere from two to three years for us to classify the waters of a major river basin. He said, "Why take all that time?" Well I said, "Do you know any faster?" Well, he laughed and said, "Well, we've classified from a map on the wall once or twice." I said, "Well, we can't afford to do that." So this is serious business; and I think, although this is slow plodding work and tedious, you understand now and can appreciate what we are trying to do: to give you the truth, to give you the facts about the waters in the Neuse River Basin. And naturally you are particularly interested in the waters in this area. I believe that the next on the agenda, Mr. Hubbard, is to hear from those who wish to make some remarks, comments, or suggestions. Mr. Hubbard.

Mr. Hubbard: Mr. Chairman, gentlemen. This is the portion of the program during which we will hear from those who wish to offer advice and comments to the Committee. It's the most important part of the hearing insofar as the Committee is concerned. They've heard this other now two or three times, but they have not heard your recommendations. Those are the most important to them. I have here by indication on the forms, a number of people who have indicated that they would like to be heard, and I will recognize those

people and ask them to come to the microphone so that we can get their comments recorded on tne machine. We must record the proceedings verbatum following which we will prepare a proceeding report which will be mailed out to all the people who attended the hearing, so that you can review that and keep it for your files.

Senator Simpkins: Excuse me, Mr. Hubbard, you mean that this portion of the hearing today will be recorded?

Mr. Hubbard: The entire portion - the entire hearing - that's the reason this is not a public address system. It's a recording device.

Senator Simpkins: I would like to get a copy of it.

Mr. Hubbard: Yes, sir, you will get a copy of it. And incidentally, Senator, I have your card before me, and you indicated a minute ago that you were talked out. I wonder if you have some words of wisdom now that you would like to give the Committee.

Senator Simpkins: I, of course, don't have any words of wisdom. I have never been accused of that, but . . .

Chairman Whitfield: Senator, turn around here and address the Committee, please, so we can hear you good.

Senator Simpkins: First, may I take this opportunity to compliment your fine Committee and to praise you for the work that you have done and the many hours that you have spent. I agree certainly, Senator Whitfield, with the importance of this study and that we must work together as a team if we are going to accomplish this most important step. I am vitally interested, not only as a citizen, but to represent the six counties in this senatorial district. Being from New Bern, I, of course, am interested in what New Bern is interested in; but I am also just as vitally interested in the problems in Kinston, Greene County, and the others, and particularly the problems that face our State. I just wanted to make that remark to you and your fine Committee and to compliment you for the fine efforts you have put forth. And as for the very important step that is before us, I wish to assure you of my cooperation in anything I can do to aid you in your work; please feel free to call on me. Thank you.

Chairman Whitfield: Thank you, Senator. Just a minute, Mr. Hubbard, just a minute, please, sir. Now we want everyone here to say anything they wish to say. You who have read the report, you in the industrial field, and municipal field, all who have heard and understand the report; if you have anything to say concerning the report as it affects your industry or any other matter, this is the opportunity for you to say so. We will be very happy to hear from you, and that is what we are here for.

Now it is team work, Senator - Senator Simpkins - it is team work. As I say, we are not a punitive committee; we've come to help you. We are here for that purpose. We don't attain great achievements by talking about the court. We've thrown the law out the window. But now I had better hasten to remind you, though, that if somebody in the Neuse River Basin is hard-headed enough to make us pull it back in, we would pull it back in mighty quickly. But we want to let you know that we consider that this is a matter for you, the Committee, and our staff to sit around the conference

table and find the best solution to your problem that affects you and affects the whole State. This is teamwork, and we consider you a part of our team, too. We are part of your team to solve these problems. That's why we are here. And I'll repeat what I've said many, many times throughout the State, that fair-minded people can solve any problem around the conference table that should be solved. And as I said, we hope that there is nobody in the Neuse River Basin that will make us pull our law back through the window, that we have thrown out, because we had rather do it around the conference table; but we do have adequate law to do whatever is necessary to clean up the streams of North Carolina. Mr. Hubbard.

Mr. Hubbard: Thank you, Mr. Chairman. We also have with us Mr. Sam L. Whitehurst, State Representative from Craven County.

Chairman Whitfield: Mr. Whitehurst had to leave.

Mr. Hubbard: Thank you. I believe that Mr. Stallings is back with us again, isn't he? I would like to recognize Mr. Robert Stallings, Jr., Mayor, City of New Bern.

Mr. Stallings: Thank you, Mr. Hubbard. Mr. Chairman and Members of the State Stream Sanitation Committee. We've reduced our statement here to a letter which we have addressed to you and which I will read at this time.

"In making this statement at the Committee's hearing concerning pollution of the waters of the Neuse River Drainage Basin, let me first commend the State Stream Sanitation Committee, Mr. Hubbard, and the Committee's personnel on the thorough and impressive study which forms the basis for this hearing.

Speaking for the Board of Aldermen and the City of New Bern, I would like to state that we do not take issue with the classification of those waters with which the City of New Bern is directly concerned. We propose to employ, at an early date, competent consulting engineers to do the studies and draw the plans for such municipal waste disposal facilities as will be required to bring the City of New Bern into conformity with the required standards, and then to promote the financing of the work proposed with all reasonable diligence."

That's the expression of our City Board and our City Staff.

Chairman Whitfield: Thank you, your honor. We are at your service at all times. Mr. Hubbard.

Mr. Hubbard: Thank you, Mr. Stallings. We also have certain other members of the City family of New Bern that have not indicated that they would like to be heard, but I would like to at least recognize them: Mr. Clifford Pace, whom we've heard from, the City Manager of New Bern. We have Mrs. Kathleen S. Orringer, Member of the Board of Aldermen. Mrs. Orringer, would you stand up, please. Thank you. We have Mr. J. E. Blue, who is City Engineer. Mr. Blue, would you stand up and be seen, please, sir. Mr. W. B. Barlling, who is the Director of Public Utilities, and Mr. Winslow M. Edwards, who is with the City of New Bern Planning Board. Is Mr. Edwards in? Mr. Edwards, we are glad to have you, sir. The next person that I would like to recognize for a statement is Mr. M. E. Hines, the Mayor of the Town of Trenton. Mr. Hines, we would be glad to hear from you, sir.

Mr. M. E. Hines, Mayor, Town of Trenton, Trenton, North Carolina: Gentlemen, ladies, and Mr. Chairman. I would like to just comment a word or two on the subject which I am not too familiar with. I'm from Trenton; I am on the upper end of Trent River as you have listed here. As I observe from the map, we are classified "C"; I believe we are in that classification. I understand it's for fishing - that's the main purpose - for fishing. I don't know to what extent that would mean to us. Our fishing up Trent River that far is very weak and very puny. So we will have to discuss that with you later.

Chairman Whitfield: To bring it up to "C" will be very strong, won't it, and not weak and puny?

Mr. Hines: What's that?

Chairman Whitfield: Maybe when you get it up to "C", the fish will be strong and not puny.

Mr. Hines: Well, I say as far as we are concerned, we . . .

Chairman Whitfield: I was just joking.

Mr. Hines: Anyway, we will have to learn more about that, as to the pollution and as to the campaign that will follow. We will have to seek information from your Committee, I guess, and you will be informed

Chairman Whitfield: We are at your service, and we feel quite confident that we can get together on whatever your needs are.

Mr. Hines: Thank you.

Mr. Hubbard: Thank you, Mr. Hines. I would like to recognize at this time, Mr. Chairman, Mr. Kenneth Johnston, who is Fisheries Investigator with the North Carolina Wildlife Resources Commission. And before he comes to the front, I want to recognize the fact and to acquaint the Committee and others with the fact that we have been assisted on numerous occasions by representatives of the North Carolina Wildlife Resources Commission. In fact, we have depended largely upon their advice and recommendations concerning fishery waters,and concerning the classifications of waters for sport fishing in particular. Mr. Johnston, we are glad to have you present and will be glad to hear from you at this time.

Mr. Kenneth Johnston, Fisheries Investigator, North Carolina Wildlife Resources Commission, Box 186, Hookerton, North Carolina: I have no comment at this time.

Mr. Hubbard: We also have with the same organization, Mr. Sheppard - Mr. P. Sheppard - who is Wildlife Protector. Mr. Sheppard, would you like to make a statement?

Mr. P. Sheppard, Wildlife Protector, Craven County Wildlife Club, Route 1, Box 26, New Bern, North Carolina: No comment at this time.

Mr. Hubbard: All right, sir. Mr. Michael P. Mitchell, who represents himself as an individual here in New Bern, has indicated that he would like to offer comments. Mr. Mitchell, we would be glad to hear from you.

Mr. Pace: Mr. Hubbard, I believe Mr. Mitchell has excused himself from the meeting.

Mr. Hubbard: All right, sir, thank you, Mr. Pace. We have a co-worker, Mr. Chairman, present with us - in fact, two of them this morning - representing the County Health Department here in New Bern, and the County Health Department in our adjoining County of Pamlico. First, I'll recognize Mr. C. V. McCotter, Sanitarian, with the Pamlico County Health Department at Bayboro.

Mr. C. V. McCotter, Sanitarian, Pamlico County Health Department, Bayboro, North Carolina: Thank you, Mr. Hubbard. Members of the Committee, the first thing I would like to say is to compliment you on the work that you have done in the classification of Neuse River so far. The relationship that Pamlico County puts on such classification is twofold. First, we have a tremendous shellfish production which has been on the decline for a number of years, and as a lot of people have said, "What are we doing - giving our oysters to Chesapeake Bay in full?" No, that hasn't been the case, but it has appeared to be the case; and as Mr. Hubbard and some of his fellow workers stated, some of our areas have had to be closed on account of polluted waters. That is very bad for our industry. The one other thing that I wanted to stress was the fact that in the last few years our waters in Eastern North Carolina have been taken over literally by vacationers and bathers and boaters; and as the trend goes to less work hours, a person has to have a place for recreational purposes. And that has been growing by leaps and bounds in North Carolina, and Pamlico County in particular. We, being a small county, have only a limited number of facilities; but it is a shame to have facilities that you offer the people, that are not up to standards for such purposes. And anything that can be done to bring those up to the standards, I'm sure, would be greatly appreciated by the unsuspecting citizens from the western part of our State and other states that are enjoying these benefits, not only in Pamlico County, but the other areas that adjoin the Neuse River Basin. I thank you.

Chairman Whitfield: Thank you, Mr. McCotter. One of the problems that we are here to help solve is the pollution of our shellfish waters. This afternoon we are going down to Oriental and around Vandemere; and we would like to hear about any other polluted shellfish waters in this area, because we want to see about it. Because it's a folly to destroy shellfish industry. Not only that, we want to protect the bathing beaches; but you must realize, too, that these bathing beach areas must observe sanitation rules of the highest. So working together is the only way we are going to solve this problem. Mr. Hubbard.

Mr. Hubbard: We have with us Mr. Henry Swiggett, Sanitarian, Jones County Health Department, Trenton, North Carolina, who did not indicate that he would like to be heard, but I would like to recognize him; and if he has something to say, we would be glad to hear from him. (Mr. Swiggett indicated from the floor that he did not wish to speak.) Thank you for being here; and,Mr. Chairman, the next person I would like to recognize and the person who has indicated he would possibly like to be heard is the Honorable Mr. J. F. Laroque, Member of the Board of Aldermen, City of Kinston. Mr. Laroque, would you like to make some comments, please, sir?

Mr. J. F. Laroque, Member of the Board of Alderman, City of Kinston, Kinston, North Carolina: Mr. Chairman. I am very much interested in the remarks made by our respected neighbor, Mr. Whitehurst, throughout Lenoir County and in the State Legislature. In reference to that, I would like to say that the City of Kinston, in respect to its water supply, has no problem on surface water. Every drop of water in the name of the City of Kinston comes from artesian wells; and when we have from about $2 to $3 million involved to do the things that will be necessary for us to do, it is only natural that we would inquire and ask for specific reasons why that should be done, and that we have done and will continue to do. Because this money doesn't come from our individual pockets; it comes from people from all walks of life who pay for those things and who will, no doubt of course, benefit from those things. We do not think, as far as we know at this time, that our health is involved at all on that account; but we wouldn't stop there if the health of our neighbor or anyone concerned with our sewage is involved. We would not have them hurt by that at all; but when we've got from $2 to $3 million involved and the upkeep of this sewage disposal plant to consider, then we have asked and will continue to ask for specific reasons why the expenditure should be made. I would like to say this, however: some months ago I went to Mr. Hubbard's office, and he gave me about two hours of his time. I left his office greatly relieved due to the fact that I felt sure, and I still feel sure, that our problem is in excellent hands - the hands that have been handling this matter - and they are handling it in an objective way all the way through. And if in the final wind of this kind we kill an innocent bystander, why we will reserve our sewage disposal lot in the City Conley Cemetery.

Chairman Whitfield: We are not worried about the problems of Kinston being solved. They will be solved, if there are any. Mr. Hubbard.

Mr. Hubbard: The next person, Mr. Chairman, is Mr. Robert Monte, who is the Manager of the Craven Rendering Company; he indicated he might want to offer comment. Is Mr. Monte in the building? Apparently he is gone. Then we have a Mr. McEnally from the New Bern Provision Company who indicated that he might wish to be heard. Has he gone also? Mr. G. C. Honeycutt, Partner of the New Bern Provision Company, has he left? That completes, Mr. Chairman, those that have indicated they would like to be heard. But before I turn the meeting back to you, I would like again to give everyone here the opportunity of asking any questions who would like to; so if any of you who did not indicate previously that you would like to be heard, and at the present you've decided that you would like to offer comments, please feel free to do so, because that is the purpose of our hearing.

Senator Simpkins: I have just one question.

Chairman Whitfield: We would be glad to hear from you, sir.

Senator Simpkins: Mr. Chairman, what effect, if any, will the prolonging of the classifications of the Neuse River have on the time limit set by the General Assembly to start the sewage disposal plants?

Chairman Whitfield: That's for the courts to decide. We haven't come to that point.

Senator Simpkins: Well, will the Committee make any recommendations?

Chairman Whitfield: This Committee operates under a law created by the Legislature, and we have our program and we're firing right along under our law, as the law was given and our policy, the policy set down by the Committee; and as far as that law is concerned, of course, it is not for us to comment. We operate under our law created by the Legislature. My opinion is: I'm quite sure that those that introduced that law and got it through the Legislature will realize by now, if they didn't then, that this is no overnight proposition; and I'm quite sure that before that law goes out of effect, or before 1962 comes in - I believe that is when it expires - they will be satisfied that the people who have already started under our program will meet their obligations. It's going to take some of these industries and some of these municipalities five to ten years to clean up. We must understand that; and I think that a law of this type, that says you can't do this and that after a certain given date, will not be upheld by the courts if the polluters, in good faith and under the law created by the Legislature to create the State Stream Sanitation Committee, show that they are carrying out our instructions.

Senator Simpkins: That's the statement I wanted you to make.

Mayor Scott B. Berkeley, Member, State Stream Sanitation Committee, Goldsboro, North Carolina: May I say something?

Chairman Whitfield: Yes, sir, Mayor Berkeley.

Mayor Berkeley: I want to get my two-cents worth in.

Chairman Whitfield: Well, here, get before the microphone, so you will get on the record.

Mayor Berkeley: I want to say this: Yesterday I had the pleasure of a little conference with our mutual friend Dr. David J. Rose, who was the father of the legislation I think you had in mind, Senator; and I think his feeling about the special legislation with reference to the Neuse River, which puts the time limit on pollution abatement, is complementary to this legislation here. My own view about what could happen, and I don't think it will happen under the Neuse River bill, is that if anybody, to borrow a thought from the Senator here, was dragging his feet, or somebody felt that feet were being dragged, they would have to go into the courts and ask for injunctive relief. Isn't that right? Well, if everybody was doing what the courts would order them to do, the writ of injunction would be a vanity, wouldn't it? I'd say, in other words, if New Bern, Goldsboro, Smithfield, and all of us are following the law under which this State Stream Sanitation Committee is operating, then we should find out, it seems to me, what we have to do before we start doing it. That's what is in this book here. I'm always impressed with these hearings, and I don't want to transgress upon your time too much here, but when we open these meetings for public discussion for views of our good friends and neighbors and the citizens of this great State of ours, we have a list of folks who say they want to be heard at the opening of the meeting. You call on one of them; well, he's stepped out, you find, and he's satisfied with the report, as I see it. He sees that the studies are being made and that the equities are being adjusted insofar as we humans can adjust the equities. And we all recognize the team proposition; it is the thing that would meet within balance. Now Goldsboro is in the position that Kinston's in. We know, for example, as Kinston, we are not polluting any drinking water as far as Kinston is concerned, because they get

their water from deep wells; but we are going to have to put in treatment plants to meet the standards set. We've got to do it now to save for the future. We are in the fix here in Goldsboro of having to go sometime, I think, to the Neuse River to get additional water. We've got a town out there at Seymour Johnson Air Force Base that has 16,000 new people in it. That Capehart housing area out there at Seymour Johnson Air Force Base is getting water from deep wells, but they are going to have to have some more water, too. There are 6,000 people living in that Capehart housing area which has 1,500 housing units. So we've got to get some clean water from somewhere, and we can't get it from the ground; we've tried it.

Chairman Whitfield: I want to add to what Mayor Berkeley said in his statement, Senator; and all who are here. I'm quite sure, if it ever came to a case of deciding whether an industry or municipality was dragging its feet or not dragging its feet, the courts would depend upon the State Stream Sanitation Committee to say who was dragging their feet or whether they were dragging their feet or not. Mr. Hubbard.

Mr. Hubbard: Mr. Chairman . . .

Chairman Whitfield: I would appreciate it, Mr. Hubbard, at this time, if you would tell those present - municipalities and the industries - what the next move is.

Mr. Hubbard: All right, sir. There's one or two other people I would like to mention.

Chairman Whitfield: Surely, yes, sir.

Mr. Hubbard: Mr. C. D. Kirkpatrick of the Department of Conservation and Development was here, and I wonder if he is still in the room? Mr. Kirkpatrick. He's gone? Then we have some of our industrial friends with us, and they have not indicated that they had any comments to make; but I would like to recognize them just the same. First, we have Dr. M. L. Taylor, who is Technical Director for Union-Bag Camp Paper Corp., from New York City. Dr. Taylor, we would like for you to stand up; and if you have something you would like to say, we would be glad to hear from you.

Dr. M. L. Taylor, Technical Director, Union-Bag Camp Paper Corp., 233 Broadway, New York, New York: Mr. Hubbard, I have nothing to say. I'm just glad to be here.

Mr. Hubbard: We also have with us Mr. H. L. Jacobs, who is the Waste Consultant for the E. I. du Pont de Nemours and Company - they have a plant at Kinston - and Mr. Elliott who is accompanying him, and they are located on the front row. Mr. Jacobs or Mr. Elliott, would you like to offer any comments?

Mr. H. L. Jacobs, Waste Consultant, E. I. du Pont de Nemours & Company, Kinston Plant, 200 North Spring Valley Road, Wilmington 7, Delaware: Mr. Hubbard and Senator. We enjoyed the meeting very much, and we were very much interested in what you are trying to do.

Chairman Whitfield: Thank you, sir.

Mr. Hubbard: Now if there are no others who would like to be heard or who would like to ask a question, the Chairman of our Committee has asked me to tell you what the next step will be. Following the completion of this hearing, a complete transcript in a form of a proceedings report will be compiled and mailed to all persons on our mailing list and to all persons who attended the hearing. That was one of the reasons why we had you fill our these forms, so that we could send this information to you and you could read it and study it at your leisure. Following the completion of the hearing report and its study, together with the study of the basic technical report, the Committee then will meet at some future date at their discretion, and officially assign the classifications to the waters of the Basin. I would presume that normally that will take from two to three months, because we have to permit a 30-day period in which anyone may offer a written statement which would be included as a part of the hearing report. Therefore, if any of you after you leave the hearing wish to submit a brief containing your statement, then you do so within thirty days; and it will be considered just as much as a statement made at the public hearings. At the time of assigning classifications, the Committee will, in accordance with the requirements of the statute, designate the effective date upon which the enforcement provisions of the law will become effective. That effective date is normally at least sixty days and usually longer - usually a longer time than that following the actual assignment of classifications.

During that period we will prepare and issue, after approval of the Committee, the Comprehensive Pollution Abatement Plan, which I mentioned earlier. The plan will take under consideration each source of pollution; it will discuss it in relationship to its importance in terms of problems created by the discharges from that source of pollution, indicate the corrective actions which should be taken by the municipality or industry or individual, whichever the case may be, and request the municipality or industry or individual concerned to submit a proposed plan of approach toward the accomplishment of their pollution abatement improvements. The proposed plan will be considered by the Committee; and if found to be acceptable and realistic in relationship to the magnitude and complexity of the problem and can be approved, a temporary permit may be issued by the Committee, although you are continuing to discharge waste that's causing pollution, for a reasonable period during which you may continue that activity, pending the completion of necessary waste or sewage treatment works. The period of time will usually vary, depending upon the complexity of the problem, but in most cases a maximum of about three years will be given you in which to get your house in order; that is, do your planning, your studies, and come forward with the construction of the necessary improvements, if such improvements are required by the plan.

All of this brings into focus the comprehensive nature of the clean-up program and the manner in which it will be executed under the Committee's policy. We, of course, are anxious to receive, and we believe that we will continue to receive, the same type of voluntary cooperation that we have in the 50 percent of the State that already is under the Comprehensive Pollution Abatement Plan.

We are at present, or our municipalities and industries are at present, spending at the rate of some $12 to $15 million per year, Senator, in the cleaning up of these problems that are affecting adversely our water supplies. That rate, however, in relationship to the problem is not adequate; the rate will have to be stepped up and will be stepped up as we continue to classify the various river basins and bring others under the requirements of the plan.

So we can anticipate that we will continue to operate somewhere above an expenditure for sewage and waste treatment facilities in this State of $15 million per year, if we are going to abate our pollution and keep up with normal growth and expansion in terms of industry and in terms of population. The problem is not one that is solved at one time, and it is not one that will remain solved, because each time an industry changes processes and each time that we have a census, we find that our population is growing; therefore, the load is continually getting larger and larger, and our water resources are continually remaining at about the same level. It is obvious, therefore, that this is a continuing problem; but at the present time, we must attempt to catch up the ground that we have lost in the past when we weren't paying proper attention to the problem.

That about completes our presentation, Mr. Chairman, except that I would like to thank these people for bearing with us; for coming and assisting the Committee with their advice and recommendations.

Chairman Whitfield: Thank you, Mr. Hubbard. Thank you, ladies and gentlemen. Now if you were nervous before you came as to what might happen to you, I'm sure you're no longer nervous, if you realize it is team-work. Sometimes we've had audiences so nervous that you could feel the tenseness, because they felt that somebody had come here to take them up by the nape of the neck and issue orders causing them to spend millions of dollars before they should, perhaps.

Reminds me of the young minister who just graduated from the seminary, and he was invited to his home church to preach his first sermon. The big Sunday came, and Sunday morning he told his father, "Dad, I don't believe I can go through with this. I'm so nervous I don't know what to do. I don't understand myself, I've never been this way before." The boy's father said, "Well, Son, come up to the den." So he poured him out a half a glass and said, "Drown this," and he did; and after the service he said, "Well, Dad, how did I do?" His father said, "Well, Son, don't ever preach a 45-minute sermon again. That's just too long. You're starting off wrong. And another thing, get your statistics right. Don't you know, don't you remember that there are ten commandments, not twelve. For goodness sakes, don't make that mistake again. There are twelve Apostles, not ten. And get your history right - David slew Goliath with a sling-shot; he didn't stomp hell out of him."

Well, you know by now that we didn't come here to slay you and we didn't come here to stomp you; but we have come here to help you clean up that pollution that needs to be cleaned up, and we are at your service. Call on us, and we will help you; and I want to leave this warning, though: please call on us - now again - please get ready and don't let us have to call on you. Don't let us have to send you a notice; please come to see us. Now we want you to get ready and notify us when you can come to see us. Of course, anytime that you are ready, we are ready to receive you. We are North Carolinians, proud of our State, and we have many firsts. We are ahead of the procession now in the South in cleaning up our streams, and let's keep ahead. We know that you are going to do the job that's before you, and you know by now that we are going to help you do the job. God bless you all, and let's get down to work. Thank you. The meeting is adjourned.

Oh! gentlemen, gentlemen, wait a minute, wait a minute. Please wait a minute. I've made a mistake here. I usually - sit down members - everybody sit down a minute, please. The Committee here has been insulted - I have

insulted the Committee - they wanted to speak some. I usually give them a chance; and what happened is, I usually introduce them first. And in view of the fact that we've got to make a date - a timetable with the North Carolina Navy this afternoon - I was in such a hurry I didn't even introduce the Committee. So I'm going to start to my right here and introduce the Committee, and give them a chance to say anything they want to say. Mr. J. N. Vann from Ahoskie; he represents industry. Mr. Vann, will you please pardon me for this error?

Mr. J. N. Vann, Member, State Stream Sanitation Committee, Ahoskie, North Carolina: I wouldn't excuse you for anything. Thank you, Mr. Chairman. I believe it would be proper to address you as patrons of the Neuse River. New Bern has a fine history, and its fame is varied in many ways. I am thinking at the moment of a great citizen who lived here, who served his country in a nation-wide manner with great distinction. He had a great influence over the political thinking of the people of this State. I'm referring to the Honorable F. M. Simmons, Senator for a long time in the United States Senate. You have many more things that have brought you fame. You had a Governor's Palace here, a show place, that is not to be compared to anywhere in the South. I've always been at a loss, Mr. Mayor - where is the Mayor - excuse me, Mr. Mayor - as to why your Chamber of Commerce went to sleep and let you move the Governor's Mansion to some other point in the State. You have developed and produced a product which has been known and used from Key West to the Canadian Border, which is a liquid concentrate, whose trade name was CCC. We have been talking the entire morning about water. I'm going to tell you the truth about it. We are not interested in water, but what disturbs us is what you folks put in it. That's what brought this State agency into being. We hold to the philosophy that no man at any time has ever had the moral right to dump waste into a stream and turn his back on his neighbor below him who has to hold his nose and add his human leavings in waste. That situation is bad, and it's growing progressively worse until we do something about it. The destiny of the Neuse River will be determined on just what you do and just how soon you will be able to correct your mistakes of long standing.

A lady called up a County Farm Agent over the telephone, and she told him she had started her a chicken ranch, and she said, "I want to first find out how long I should allow the roosters to run with the hens." The County Farm Agent was talking over a telephone to another party at the time. He said to her innocently, "Just a minute." She said, "I thank you very much," and hung up the telephone.

We don't expect you people in the Neuse River Area to progress quite that fast, but we earnestly and honestly believe that you should put this program on your priority list as an urgent public necessity. I thank you.

Chairman Whitfield: Thank you, Mr. Vann. Mr. Scott B. Berkeley, Mayor of Goldsboro, who represents municipality on this Committee.

Mayor Berkeley: Mr. Chairman, your Honor, Members of the Committee, ladies and gentlemen. I just want to thank a grand Mayor of a great and glorious Town for a wonderful time in New Bern, North Carolina.

Chairman Whitfield: Thank you, your Honor. On my extreme left here is a representative of the Department of Conservation and Development on our Committee, Colonel Snow. Colonel, do you have any remarks that you would like to make before we close?

Col. B. C. Snow, Member, State Stream Sanitation Committee, Raleigh, North Carolina: Mr. Chairman, Members of the Committee. I'm glad to have the opportunity to make this statement. Section HC of the Department of Water Resources Act passed by the General Assembly on June 4, 1959, provides that: Effective July 1, 1959, Mr. J. M. Jarrett, Chief Engineer, Division of Sanitary Engineering of the State Board of Health, and myself, the Chief Engineer of the Division of Water Resources of the Department of Conservation and Development, shall cease to be ex officio members of the State Stream Sanitation Committee. It has been to me a great pleasure and a broadening education to serve as an ex officio member of the Committee since July 6, 1954. Biochemical Oxygen Demand, Coliform Bacteria, Limnology, Photosynthetic Areation, and several other words theretofore unknown to me as a Civil Engineer, have been added to my vocabulary. The State Stream Sanitation Committee in my opinion has performed an excellent job in conserving the water resources of the State, and will continue to do so. I am very grateful to have been associated with the members and the staff of the Committee in this highly important work. I hope that I shall for a considerable period of time continue to cooperate with Mr. Hubbard and his associates.

Chairman Whitfield: Thank you, Colonel. Of course, as you know, you who are familiar with the new law that was passed that Colonel Snow referred to there, it creates the Department of Water Resources and brings all the water agencies of the State under one head; and takes effect July 1, 1959. Of course, until the Governor gets back from Russia, we will just stay as we are in our respective divisions until he appoints a director of the new department and all. Of course, as far as the State Stream Sanitation Committee is concerned, all we are doing is just being picked up and moved from the Department of Health to the Department of Water Resources. Our Committee remains intact just as it is now, and we will have our own authority and all; so the only way it affects the State Stream Sanitation Committee is just to be moved from one house to another. We certainly hate to lose Colonel Snow, of course; we don't know what will happen in the consolidation. It is possible that some of the different divisions will come over into the Department of Water Resources; it is possible that there will be some further consolidations. We don't know what is going to happen; all we know is that as far as the State Stream Sanitation Committee is concerned, we are just moving from one house to another. We certainly have enjoyed having Colonel Snow with us; his has been a great contribution. He's one of the most efficient researchers I have ever run into. If you want the facts, tell him, and he will get them for you.

Next, we have another gentlemen who represents municipality on our Committee, Mr. Johnson, from Asheville. Mr. Johnson.

Mr. P. Greer Johnson, Member, State Stream Sanitation Committee, Asheville, North Carolina: Mr. Chairman, ladies and gentlemen. I would like to commend the City Officials here on their attitude toward this whole problem, and would like to say how much I am impressed both yesterday and today, that you people in the Neuse River Basin are several years ahead of the thinking of the people in the French Broad River Basin. Now the French Broad River Basin is home, and we were blessed by the good Lord with the best water in the world. We never did very much about it, until now we wake up with a $7-million headache. We are going to handle it. It's in the mill of progress, but we got behind. I'd particularly like to caution you municipal officials. You mentioned a million dollars, $2 million, that's a lot of money, but now let's

get your engineering work done, keep in contact with Mr. Hubbard and the staff, so you don't wake up in a few years with a $5-million or $7-million headache.

Chairman Whitfield: Thank you, Mr. Johnson. To my left here is Mr. T. B. Upchurch who, as so many of you know, is one of North Carolina's great farmers. He is on the Committee representing agriculture. Mr. Upchurch.

Mr. T. B. Upchurch, Member, State Stream Sanitation Committee, Raeford, North Carolina: Thank you, Mr. Chairman. I don't think I have anything to say, except to say that I am glad to be here. I think we have had a good meeting; we certainly appreciate the fine attitude of all you people here. It is always a pleasure to come to New Bern. Thank you.

Chairman Whitfield: For your information, I may say, I am the other member on the Committee who represents agriculture. To my right here is our Vice-Chairman. We wisely decided several years ago that we needed some brains and beauty together on our Committee, so we looked around and chose very wisely Mrs. Karl Bishopric of Spray who represents industry. Mrs. Bishopric.

Mrs. Karl Bishopric, Member, State Stream Sanitation Committee, Spray, North Carolina: Thank you, Mr. Chairman. May I say, too, that I am very happy to be here, and so proud that New Bern is one of the places, one of the centers, that is bringing back to memory the riches of their past, and one of the places, as shown by the Mayor's letter, that is looking forward to a long and richer future; because we do have to look forward as families, regions, cities, states, nations, and the world. We can't let $7 million headaches slip up on us, and we certainly cannot let our water resources further deteriorate; but they must be taken care of, developed, and enlarged, as Senator Whitfield and everyone who studies water knows. I want us all to realize how proud we should be in North Carolina to have a man who has prominence in our State and Nation in preserving water resources, Senator Whitfield, who speaks for water for all sections and for all needs. We have had another great conservationist in North Carolina who has been world-wide known - he is living now in Virginia, Hugh Bennett - but what he has been to land, I predict that Senator Whitfield will be to water in the Country.

I was reading the Greensboro Daily News this morning and noticing how much California is doing for their waters. We know that California has greater water problems in the southern part of its state, though you would think it had all the water, than we have; and just now we see that California is going to have a $2 billion man-made water project going down through the center of the State. It's been proposed a long time, but now it seems to be an assured thing. So we've got billions and billions of dollars of value in our rainfall in North Carolina, and we must preserve that and make it useful for everybody in the State; and we are so glad to see that the Neuse River is on the way to that end, and its development is going to help. You know, I come from the part of the State that has such a little bit of water, and while we have a big supply of water in the Roanoke River and we have smaller rivers flowing past our section, we don't have such water as you have down here. I don't believe you realize its value and what people, who come to New Bern to see the Palace and to meet their friends and families, expect of all this water. They expect all the seafood to be usable; they expect all the water to be very usable; and we know that you are going to keep it that way in the future. Thank you.

Chairman Whitfield: Thank you, Mrs. Bishopric. I might say that speaking about the shortage of water areas, geologists tell us, and engineers tell us, that from Greensboro east for about fifty miles, you might say to Durham, I guess, the strata of the soil produces a shortage of water. We do not have enough water there in that strata all the way from the Virginia line to the South Carolina line; so we might as well take that into consideration. Of course, we are blessed here in the East with plenty of water now, and we want to keep it that way and clean up what we have. We have last on our program one of our mountain members - he represents wildlife - and we have discovered a latent power that he has that we never had discovered until last September. He's always been very efficient, of course, but we didn't know that he was a "bodacious" orator, as Snuffy Smith would say, until last September; and so I don't know whether he's going to give you one of his orations or not, but we are going to give him the chance. Mr. Farthing from Boone.

Mr. H. Grady Farthing, Member, State Stream Sanitation Committee, Boone, North Carolina: Mr. Chairman, members of the Committee, ladies and gentlemen. Chairman Whitfield, knowing that I am from the tall timber of northwestern North Carolina - he likes to pick on me a little - this morning at the breakfast table, he was teasing me about being here when tomorrow is the big Rhododendron Festival on Roan Mountain. Roan Mountain is half in North Carolina and half in Tennessee. They select about fifty beauty queens from North Carolina and about fifty from Tennessee, and they go up there tomorrow to select the queen. Since he's been teasing me, I have a hundred beauty queens in my mind with all their frocks and frills. I have them combined with the blossom of the flaming rhododendron, the white clouds, and the blue sky. My mind hasn't been here much.

During the wintertime in our section, when the bleak winds are blowing from the snow-covered mountains that surround my home, and the wind-driven snows cover the valley, often my thoughts are down here with you. I get the roaring winds on the outside mixed up with the roar of your breakers here. I imagine that I'm here on your hot sands, but now I'm here, and my thoughts are back up there.

Again, I remember that Sunday is the "singing on the mountain", Grandfather Mountain; and Saturday night there will be at least ten thousand people sleeping in the cars, on the ground, on the rock cliffs, anywhere they can get, to be ready to go to the mountain on Sunday morning for this singing occasion. By ten o'clock Sunday there will be anywhere from thirty to fifty thousand people there. Everybody does just what he wants to do. If some man wants to make a speech, he gets up and makes a speech, whether anybody listens or not. Over here one crowd will be singing, "Will There Be Any Stars In My Crown", and over there another will be singing, "No Not One". I used to hear Governor Broughton tell about the man that would get mixed up in his gestures, and he said, "When the roll is called up yonder I'll be there". (pointing down) Well, You see all those things there, they have a grand time, and I would like to be there; but I think I'm going to take a deep-sea fishing trip tomorrow.

It only seems but a day; I can see Grandfather Mountain now, when as a barefoot boy, I slept on this mountain. The next morning I saw the grand king of day rise from a resting place in yonder east, and climb the archstone of heaven to the summit, and from there pour her gleaming rays into the sleeping valleys below. Yea, Mr. Chairman, I heard the rumble of the storm cloud

as it approached from the west; I saw the zig-zag lightening as it played across her breast. All of the heavens were in a turmoil. I looked to the east where the mountains rippled off to the Peidmonts - the sun was shining and all was in peace - and then back to the monster that was spitting fire and brimstone in its path, and drenching the countryside beneath her breast. I turned my boyish face to the heavens, and I said, "Oh! what person can live and see such a scene as this without knowing out there somewhere there is an all powerful, everlasting God." Those things linger in your mind.

If I may have a few minutes more, Mr. Chairman, I just want to say a few words about the trip that we had to the great Air Force Base over in Goldsboro. They took us out there and showed us the planes. I think if we had had Khrushchev with us and he had seen what we saw there, that he would have signed the peace pact immediately. But this man was talking to me, and he was telling about us finding the great northwest passage under the frozen caps of the northwest; he was telling about shooting the great missiles into space - yes, into outer space - into the orbit of the earth on beyond the orbit of the moon and into the orbit of the Sun; he was telling about the great cross-country missiles that would carry the warheads, that would blow a city off the map with one blast. And as he talked I was reminded of what a preacher said in Atlanta a few days ago. He said, "We might be getting a little bit out of orbit ourselves, and we would change the familiar Bible quotation to what is God, that man should be mindful of Him". He said that we should get back to earth a little bit. And let me wind this up just by saying to you what I wrote on this pad when I first came in here. As one old squirrel hunter to another one, "There are a few rules that we've got to adhere to in this world, and here are two, I think; we've got to keep our powder dry and our water clean; if we do otherwise, we will perish from the face of this earth".

Chairman Whitfield: The meeting is adjourned.

(Meeting adjourned at 12:35 p.m.)

ERRATA SHEET

June 24, 1959

RECOMMENDED CLASSIFICATIONS

NEUSE RIVER BASIN

Streams*	Character of District	Condition of Waters	Chief Present Usage	Best Usage	Proposed Class	Comments
Change on Page 282 of Report between Items 1 and 2 in Section A.						
A-S. Smith Creek from dam at Wake Forest Water Supply to mouth.	WF	N	Agri.	Agri.	D	
1. Hatters Br.	WF	N	Agri.	Agri.	D	
a. Spring Br.	WF	P	WD	Agri.	D	D.S. and I.W. from Wake Forest.
2. Sanford Cr.	WF	N	Agri.	Agri.	D	
Change on Page 299 of Report between Items 6 and 7 in Section I.						
I-S. Trent River from mouth of Brice Cr. to mouth.	PA & Swp.	P	WD	Fishing	SC-Swp.	D.S. and I.W. from New Bern.
1. Brice Cr. to last downstream bridge.	W & Swp.	N	Fishing	Fishing	C-Swp.	I.W. from Nello L. Teer Quarry.
a. Great Br.	Swp.	N	Fishing	Fishing	C-Swp.	
b. Long Lake	Swp.	N	Fishing	Fishing	C-Swp.	
c. Lees Br.	Swp.	N	Fishing	Fishing	C-Swp.	
d. Black Br.	Swp.	N	Fishing	Fishing	C-Swp.	
e. Georges Br.	Swp.	N	Fishing	Fishing	C-Swp.	
2. Brice Cr. from last downstream bridge to mouth.	Swp.	N	Fishing	Fishing	SC-Swp.	
3. Bridge Cr.	Swp.	N	Fishing	Fishing	SC-Swp.	
4. Lawson Cr.	PA	N	Fishing	Fishing	SC-Swp.	
a. Lanes Br.	PA	N	Fishing	Fishing	SC-Swp.	

*Any natural stream not noted in Table 9 will carry the same classification as the stream to which it is tributary.

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